PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Walter W. Collins
Application No.	:	09/680,697
Filed	:	October 6, 2000
For	:	FOLDING KNIFE WITH ACTUATABLE SAFETY LOCKING MECHANISM
Examiner	:	Clark F. Dexter
Art Unit	:	3724
Docket No.	:	530055.413R1
Date	:	December 23, 2009

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDED APPEAL BRIEF

Commissioner for Patents:

This amended brief is in furtherance of the Notice of Appeal, filed in this case on June 12, 2008, and the Notifications of Non-Compliant Appeal Brief, mailed on November 3, 2008, January 6, 2009, July 20, 2009, and November 23, 2009.

I. REAL PARTY IN INTEREST

The real party in interest is KAI U.S.A., Ltd., dba Kershaw Knives, which is the assignee of the present invention, as evidenced by the assignment set forth at Reel 016206, Frame 0933. The assignment of record is to KAI U.S.A., Ltd., dba Kershaw Knives, having an address at 18600 S.W. Teton Avenue, Tualatin, Oregon 97062.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences which directly affect or will be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-13, 15-25, 27-29, 34, 36, 37, 45, 52, 54, 58-60, 62, 63, 65 and 66 are pending in the application. Claims 1-13 and 15-22 are allowed. Claims 23-25, 27-29, 34, 36, 37, 45, 52, 54, 58-60, 62, 63, 65 and 66 stand rejected by the Examiner as noted in the Office Action mailed March 13, 2008. Claims 14, 26, 30-33, 35, 38-44, 46-51, 53, 55-57, 61 and 64 are canceled. The rejections of claims 23-25, 27-29, 45, 52, 54, 58-60, 62, 63, 65 and 66 are being appealed.

IV. STATUS OF AMENDMENTS

A Final Office Action was mailed March 13, 2008 (hereinafter "Final Office Action). In response to this Final Office Action, a Notice of Appeal was filed on June 12, 2008. No amendments have been filed in response to the Final Office Action mailed March 13, 2008.

V. SUMMARY OF CLAIMED SUBJECT MATTER

A user frequently has a need to open a pocket knife with one hand. As one example, if he has rope in one hand that he needs to cut at a specific place, with this invention, he can continue to hold the rope with one hand at the desired location, remove the knife from his pocket with his other hand, open the knife with that other hand, and then use the knife to cut the rope he is holding. This was not possible with any knife of the prior art.

Compare the usefulness of a knife that can be opened with one hand to the prior art, standard pocket knife. In the prior art, a user needed to set the rope down, use two hands to open the knife, one to hold the handle and the other to pull out the blade, then, once the knife is open, transfer it to one hand, while picking up the rope again to cut it at the correct location.

A further advantage is that the knife can easily be opened by a person while wearing gloves. They do not need to take their gloves off in order to open this knife, they can do so just as easily, or perhaps even more easily while wearing gloves than without them on.

The benefit to the rancher, farmer, hiker, field worker, mechanic and everyday user to a knife that can be opened with one hand is tremendous. There are many situations in which being able to open the knife with a single hand is not only beneficial, but essential to facilitate use of the knife.

The product that is the subject of this reissue patent application received the 1997 Blade Show "Most Innovative American Design" award. [1] It opened up a whole new class of knives: assisted opening knives. Prior to this invention, the only spring loaded knife that could be opened with one hand was a switchblade, (also called an automatic knife) and these are illegal under various Federal and state laws. A knife made according to this invention is not a switchblade and has been specifically ruled as legal under Federal knife laws.

The claimed embodiments of the reissue application cover this spring assisted knife. The claims are directed to a folding knife, also called a pocket knife, and in particular to aspects related to a mechanism having a spring or bias element that retains the blade in a closed position and also allows the blade to be readily opened with one hand (**1:61-67**).[2] The same spring that assists to open the knife, also holds the blade closed when the knife is in the closed positioned. The user must manually move the knife a certain distance from the closed position towards the open position before the spring will begin to assist in opening the knife. They can do this by engaging ridges on the tang of the blade with their finger or by pressing their thumb into a contact pin on the blade itself. This is explained in detail, below.

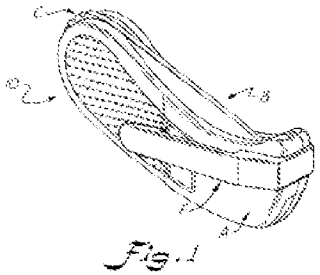

Figure 1
(Figure 1 of application)

Figure 1 shows a folding knife 10 having a handle A, a blade B, and a blade engagement portion C (**3:13-16**). As illustrated in Figures 2-4 (Figures 4A-4C of application), the blade B is connected to the handle for pivotal movement from a retracted position (Figure 2) through an intermediate position (Figure 3) to an extended position (Figure 4). In the retracted

[1] See the current attached printout from the web site at www.meyercousa.com/about.lasso (attached hereto as Appendix A).

[2] For brevity, where specific passages of the specification are cited, they will be indicated, in bold text, by a column number separated from a line number by a colon, *e.g.*, **4:12**, indicating column 4, line 12.

position, a spring 90 that is part of a plunger mechanism E retains the blade B in the retracted state in order to prevent the blade B from falling out of the handle during nonuse (**4:61-64**). The spring 90 also assists in maintaining the blade B in the extended position with sufficient force so that the blade B may be used without being locked open (**4:64-5:4**). A locking member D is provided to supply additional means for holding the blade B in the extended position. In the illustrated embodiment, locking member D is depressed to lock the blade B in the extended position (**5:4-7**).

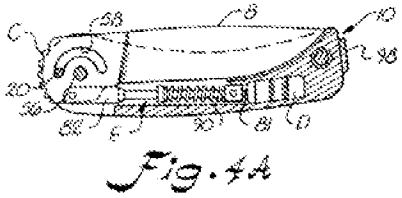

Fig. 4A

Figure 2
(Figure 4A of application)

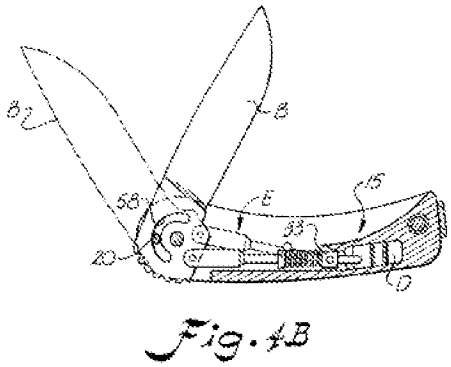

Fig. 4B

Figure 3
(Figure 4B of application)

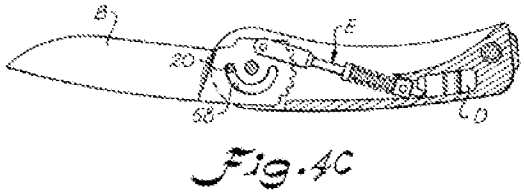

Fig. 4C

Figure 4
(Figure 4C of application)

The spring 90 provides a biasing force to the blade B, such that when the blade B is in a retracted position (Figure 2) or a partially deployed position (as illustrated by the solid-lined blade in Figure 3), the spring biases the blade B toward the retracted position, and when the blade is in an extended position (Figure 4) or a partially closed position (as illustrated by the dashed-lined blade in Figure 3), the spring biases the blade B toward the extended position. When the blade is in the retracted position, the spring 90 safely retains the blade therein, until a user applies an opening force to the blade B and manually moves the blade toward an

intermediate position. (Appellant points out that the inventive knife is legal under Federal law and is not classified as a switchblade or an automatic knife because of these features.)

When the blade B is moved manually past the intermediate position, the spring biases the blade B toward the extended position, thus assisting in opening the blade B. Figures 5A to 5C of the as filed application (reproduced as Figures 5-7, below) show how the user is able to open the knife with only one hand.

Figure 5
(Figure 5A of application)

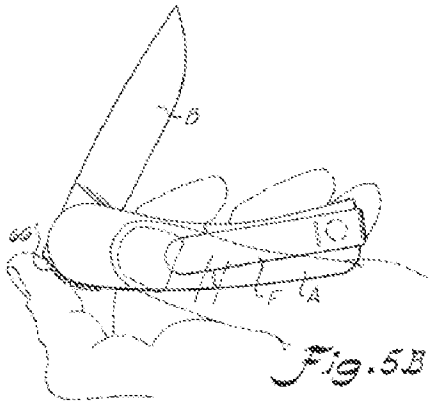

Figure 6
(Figure 5B of application)

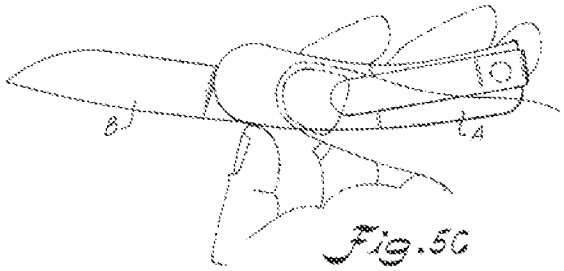

Figure 7
(Figure 5C of application)

To facilitate opening the blade B with one hand, a user places their finger on the tang of the blade, as shown in Figure 5, above, and is able to gain purchase of an engagement profile, for example, a plurality of upstanding ridges 66', located on the blade B and pull the blade B toward the intermediate position past which point the spring 90 assists in moving the blade B to the extended position (**5:8-17**). Alternatively, a contact pin may be provided such that the user can apply an opening force to the blade with a thumb or a finger of the hand holding the

knife (**5:40-45**). The user then moves the blade from the closed position towards the open position, as shown in Figure 6, above. Once the blade reaches the intermediate position shown in Figure 6, towards partly open, the spring 90 transitions from assisting to close the knife to assisting to open the knife, and rapidly opens to the fully open position, as shown in Figure 7.

As pointed out in the application as filed, a user can open the blade with their thumb or forefinger (**5:8-17**). The blade can be opened by the user with one hand **(5:15-17).** Further, a person wearing gloves or with limited hand mobility can easily open the knife.

There is no release button of the type a switch blade uses, rather, the user himself moves the blade towards the open position, and once the spring passes the intermediate point, the spring will now act to force the blade open rather than hold the blade closed. Once in the fully extended position, shown in Figure 7, above, the spring 90 holds the blade B with sufficient force so that the blade B may be used without being locked (**5:1-4**). Additionally, a locking member D may be used to lock the blade B in an extended position (**5:4-7**).

The unique combination of features of the present invention is particularly advantageous in that it facilitates (i) retaining a blade of a knife in a retracted position, (ii) holding the blade in an extended position, and (iii) opening of a knife blade with one hand, all in a manner never before possible with legal knives of the prior art.

Of course, this summary has been provided as a general description of subject matter and does not limit or define the claims or their meaning. The scopes of the respective claims are to be construed by their own terms and not by this summary.

Correlation of Claims and Specification

Hereafter is a concise listing of the claims under appeal correlated with subject matter on which each element reads, from the specification. Text in the specification is referenced, in bold type, by column and line number, separated by a colon. For example, **4:12** refers to text beginning at column 4, line 12. This listing is provided as required under 37 CFR § 41.37(c)(1)(v) for the purpose of simplifying review of the claims and subject matter. It is not to be construed as limiting the claims to the specific subject matter referenced, nor to the embodiments disclosed in the specification.

23. A folding knife, comprising:

a handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) having a blade cavity (15, **3:19-26**, Fig. 4B) and a first end (16, **3:26-27**, Fig. 3; 34, **3:39-40**, Fig. 3);

a blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) having a first end (51, **3:61-62**, Fig. 3) and a second end (53, **3:61-62**, Fig. 3) opposite said first end (51, **3:61-62**, Fig. 3), said first end (51, **3:61-62**, Fig. 3) of said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) having an aperture (hole receiving blade pivot 56, **3:64-65**, Fig. 3, 4A);

a blade pivot (56, **3:64-65**, Figs. 3, 4A) connected to said first end (16, **3:26-27**, Fig. 3; 34, **3:39-40**, Fig. 3) of said handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) and extending through the aperture (hole receiving blade pivot 56, **3:64-66**, Figs. 3, 4A) for pivotal movement of said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) about said blade pivot (56, **3:64-65**, Figs. 3, 4A) between an extended position (Figs. 4C, 5C) wherein the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is outside of said blade cavity (15, **3:19-26**, Fig. 4B) and a retracted position (Figs. 4A, 5A) wherein the majority of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is within said blade cavity (15, **3:19-26**, Fig. 4B); and

a plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) including a spring (90, **4:38-43**, Figs. 3 and 4A), the plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) pivotally connected to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) at a first end (proximate end 87, Fig. 3), and pivotally coupled to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) at a second end (proximate pins 95, Fig. 3), the spring (90, **4:38-43**, Figs. 3 and 4A) being maximally deformed when the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is pivoted to an intermediate point between the extended position (Figs. 4C, 5C) and retracted position (Figs. 4A, 5A), thereby causing the spring (90, **4:38-43**, Figs. 3 and 4A) to assist opening of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) when the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is pivoted from the retracted position (Figs. 4A, 5A) toward the extended position (Figs. 4C, 5C) beyond the intermediate point.

24. A knife as defined in claim 23, wherein said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) includes said first end (51, **3:61-62**, Fig. 3) of said blade having an extension projecting outwardly (60, **4:3-19**, Fig. 3) from said handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) when said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is in said retracted position (Figs.

4A, 5A); said extension (60, **4:3-19**, Fig. 3) defining an extreme edge portion (64, **4:3-19**, Fig. 3) with a plurality of ridges (66, **4:3-19**, Fig. 3) thereon for contact by a user when moving the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) from said retracted position (Figs. 4A, 5A) to said extended position (Figs. 4C, 5C).

25. A knife as defined in claim 23, further comprising a safety member (D, **3:13-18**, **4:20-37**, Figs. 2, 3, 4A-4C) connected to said handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) for movement between a locking position (**4:26-38**, Fig. 6) and an unlocking position (**4:26-38**, Fig. 7); said safety member (D, **3:13-18**, **4:20-37**, Figs. 2, 3, 4A-4C) defining an engagement portion (76, **4:28-33**, Figs. 6-7) projecting into a path of movement of said plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) when said safety member (D, **3:13-18**, **4:20-37**, Figs. 2, 3, 4A-4C) is in said locking position (Fig. 6) for contacting and restraining movement of said plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) when said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is in said extended position (Figs. 4C, 5C), to thereby lock said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) in said extended position (Figs. 4C, 5C).

27. A knife as defined in claim 23, further comprising said handle (A**, 3:13-18**, Figs. 1, 2 and 5A-5C) defining a first side and a second side opposite said first side and a belt clip (F, **3:13-18**, Figs. 1, 2 and 5A-5C) connected to said handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) adjacent one of said first and second sides of said handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C).

28. A knife as defined in claim 23, wherein the first end of said plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) includes a clevis (82, **4:38-59**, Figs. 3 and 4A) having a pin (86, **4:38-59**, Fig. 3) pivotally connected to said first end (51, **3:61-62**, Fig. 3) of said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C).

29. A knife as defined in claim 23, wherein said first end (51, **3:61-62**, Fig. 3) of said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) includes an arcuate slot (58, **3:61-4:4**, Figs. 3 and 4A-4C) and wherein said handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) includes a pin (20, **3:61-4:4**, Figs. 3 and 4A-4C) carried in said arcuate slot (58, **3:61-4:4**, Figs. 3 and 4A-4C), said arcuate slot (58, **3:61-4:4**, Figs. 3 and 4A-4C) having a first end and a second end, and said

first end of said arcuate slot (58, **3:61-4:4**, Figs. 3 and 4A-4C) limiting said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) from movement beyond said extended position (Figs. 4C, 5C).

45. A knife comprising:

a handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C);

a blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) pivotally coupled to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) to be moveable about a blade pivot point (center point of 56, **3:64-66**, Figs. 3, 4A), such that the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) moves between a stowed position (Figs. 4A, 5A) and a deployed position (Figs. 4C, 5C);

a plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) coupled between the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) and the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) such that a portion of the plunger (center point of holes 84, **4:38-50**; Fig. 3) remains a fixed distance (**4:52-57**) from the blade pivot point (center point of 56, **3:64-66**, Figs. 3, 4A); and

a spring (90, **4:38-43**, Figs. 3 and 4A) coupled to the plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) to act on the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) to urge the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) into the stowed position (Figs. 4A, 5A) when the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is moved to the stowed position (Figs. 4A, 5A), and operates on the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) to urge the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) toward the deployed position (Figs. 4C, 5C) when the blade is moved by an outside force from the stowed position (Figs. 4A, 5A) at least partially toward the deployed position (Figs. 4C, 5C).

52. A folding knife comprising:

a handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C);

a blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) having a tang coupled to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C), the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) configured to rotate, relative to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C), between a retracted position (Figs. 4A, 5A) and an extended position (Figs. 4C, 5C);

biasing means (E, 90, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) for holding the blade in the retracted position (Figs. 4A, 5A) in the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) while the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is in the retracted position (Figs. 4A, 5A)

and for biasing the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) toward the extended position (Figs. 4C, 5C) relative to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) when the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is moved from the retracted position (Figs. 4A, 5A) past a point of maximum bias toward the extended position (Figs. 4C, 5C); and

moving means (C, **4:14-19**, Figs. 1, 2, and 4A; 66, 66', **4:4-19**, Figs. 3 and 5A-5B; 63', **5:40-45**, Fig. 8B) for moving the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) from the retracted position (Figs. 4A, 5A) to the extended position (Figs. 4C, 5C) with one hand while holding the knife (10, Fig. 1) with the same one hand.

54. The folding knife of claim 52 wherein the moving means comprises at least one of a plurality of ridges (66, **4:3-19**, Fig. 3) formed on the tang of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C), a plurality of directional saw-like teeth (66', **4:13-19**,Figs. 5A-5B) formed on the tang of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C), or a pin (63', **5:40-45**, Fig. 8B) coupled to an upper portion of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C).

58. A folding knife comprising:

a handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C);

a blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) having a tang coupled to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C), the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) configured to rotate, relative to the handle, through an arc between a retracted position (Figs. 4A, 5A) and an extended position (Figs. 4C, 5C) when an opening force is applied to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C);

a contact pin (63', **5:40-45**, Fig. 8B) coupled to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) and extending outward from the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C), positioned such that a user, holding the knife (10, Fig. 1) in one hand, can apply an opening force to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) with a thumb or finger of the same hand;

a biasing element including a spring (90, **4:38-43**, Figs. 3 and 4A);

a first coupling element (92, **4:38-50**, Fig. 3) operatively coupling a first end of the biasing element (90, **4:38-43**, Figs. 3 and 4A) to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C); and

a second coupling element (82, **4:38-59**, Fig. 3) operatively coupling a second end of the biasing element (90, **4:38-43**, Figs. 3 and 4A) to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C).

59. The knife of claim 58 wherein the biasing element (90, **4:38-43**, Figs. 3 and 4A) is arranged such that the spring (90, **4:38-43**, Figs. 3 and 4A) thereof increases in tension to a point of maximum tension as the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is moved through the arc from the retracted position (Figs. 4A, 5A) toward the extended position (Figs. 4C, 5C), then decreases in tension as the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) continues past the point of maximum tension toward the extended position (Figs. 4C, 5C).

60. The knife of claim 58 further including a plurality of ridges (66, **4:3-19**, Fig. 3) positioned on the tang of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C).

62. A folding knife comprising:

a handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C);

a blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) having a tang coupled to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C), the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) configured to rotate, relative to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C), through an arc between a retracted position (Figs. 4A, 5A) and an extended position (Figs. 4C, 5C) when an opening force is applied to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C);

a contact pin (63', **5:40-45**, Fig. 8B) on the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C), positioned such that a user, holding the knife (10, Fig. 1) in one hand, can apply an opening force to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) with a thumb or finger of the same hand;

a biasing element including a spring (90, **4:38-43**, Figs. 3 and 4A), configured to apply a closing force to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) while the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is in the retracted position (Figs. 4A, 5A);

a first coupling element (92, **4:38-50**, Fig. 3) operatively coupling a first end of the biasing element (90, **4:38-43**, Figs. 3 and 4A) to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C); and

a second coupling element (82, **4:38-59**, Fig. 3) operatively coupling a second end of the biasing element (90, **4:38-43**, Figs. 3 and 4A) to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C).

63. A folding knife comprising:

a handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C);

a blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) having a tang coupled to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C), the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) configured to rotate, relative to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C), through an arc between a retracted position (Figs. 4A, 5A) and an extended position (Figs. 4C, 5C) when an opening force is applied to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C);

a contact pin (63', **5:40-45**, Fig. 8B) on the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C), extending perpendicular to a plane of travel of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) and positioned such that a user, holding the knife (10, Fig. 1) in one hand, can apply an opening force to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) with a thumb or finger of the same hand;

a biasing element including a spring (90, **4:38-43**, Figs. 3 and 4A), configured to resist rotation of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) toward the extended position (Figs. 4C, 5C) while the blade is in the retracted position (Figs. 4A, 5A);

a first coupling element (92, **4:38-50**, Fig. 3) operatively coupling a first end of the biasing element (90, **4:38-43**, Figs. 3 and 4A) to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C); and

a second coupling element (82, **4:38-59**, Fig. 3) operatively coupling a second end of the biasing element (90, **4:38-43**, Figs. 3 and 4A) to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C).

65. A folding knife, comprising:

a handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) having a blade cavity (15, **3:19-26**, Fig. 4B) and a first end (16, **3:26-27**, Fig. 3; 34, **3:39-40**, Fig. 3);

a blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) having a first end (51, **3:61-62**, Fig. 3) and a second end (53) opposite said first end; said first end (51, **3:61-62**, Fig. 3) of said blade having an aperture (hole receiving blade pivot 56, **3:64-66**, Figs. 3, 4A);

a blade pivot (56, **3:64-65**, Figs. 3, 4A) connected to said first end (16, **3:26-27**, Fig. 3; 34, **3:39-40**, Fig. 3) of said handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) and extending through the aperture (hole receiving blade pivot 56, **3:64-66**, Figs. 3, 4A) for pivotal movement of said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) about said blade pivot (56, **3:64-65**, Figs. 3, 4A) between an extended position (Figs. 4C, 5C) wherein the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is outside of said blade cavity (15, **3:19-26**, Fig. 4B) and a retracted position (Figs. 4A, 5A) wherein the majority of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is within said blade cavity (15, **3:19-26**, Fig. 4B);

a plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) including a spring (90, **4:38-43**, Figs. 3 and 4A), the plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) pivotally connected to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) at a first end, and operatively coupled to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) at a second end, the spring (90, **4:38-43**, Figs. 3 and 4A) being maximally deformed when the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is pivoted to an intermediate point between the extended position (Figs. 4C, 5C) and retracted position (Figs. 4A, 5A), thereby causing the spring (90, **4:38-43**, Figs. 3 and 4A) to assist opening of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) when the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is pivoted from the retracted position (Figs. 4A, 5A) toward the extended position (Figs. 4C, 5C) beyond the intermediate point; and

a safety member (D, **3:13-18**, **4:20-37**, Figs. 2, 3, 4A-4C) connected to said handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C) for movement between a locking position (Fig. 6) and an unlocking position (Fig. 7); said safety member (D, **3:13-18**, **4:20-37**, Figs. 2, 3, 4A-4C) defining an engagement portion (76, **4:28-33**, Figs. 6-7) projecting into a path of movement of said plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) when said safety member (D, **3:13-18**, **4:20-37**, Figs. 2, 3, 4A-4C) is in said locking position (Fig. 6) for contacting and restraining movement of said plunger (E, **3:13-18, 4:38-59**, Figs. 3 and 4A-4C) when said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is in said extended position (Figs. 4C, 5C), to thereby lock said blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) in said extended position (Figs. 4C, 5C).

66. A folding knife comprising:

a handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C);

a blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) having a tang coupled to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C), the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) configured to rotate, relative to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C), through an arc between a retracted position (Figs. 4A, 5A) and an extended position (Figs. 4C, 5C) when an opening force is applied to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C);

a contact pin (63', **5:40-45**, Fig. 8B) on the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C), extending perpendicular to a plane of travel of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) and positioned such that a user, holding the knife (10, Fig. 1) in one hand, can apply opening force to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) with a finger of the same hand;

a biasing element including a spring (90, **4:38-43**, Figs. 3 and 4A), configured to resist rotation of the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) toward the extended position (Figs. 4C, 5C) while the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C) is in the retracted position (Figs. 4A, 5A);

a first coupling element (92, **4:38-50**, Fig. 3) operatively coupling a first end of the biasing element to the handle (A, **3:13-18**, Figs. 1, 2 and 5A-5C);

a second coupling element (82, **4:38-59**, Fig. 3) operatively coupling a second end of the biasing element to the blade (B, **3:13-18**, Figs. 1, 2, 4A-4C and 5A-5C); and

a locking member (D, **3:13-18**, **4:20-37**, Figs. 2, 3, 4A-4C) positioned in the handle and having a first position in which the blade may be freely moved between the retracted (Figs. 4A, 5A) and extended positions (Figs. 4C, 5C) and a second position in which the blade is locked in the extended position (Figs. 4C, 5C).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. The rejection of claims 23-25, 27-29, 58-60, 62, 63, 65 and 66 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

2. The rejection of claims 58-60, 62, 63 and 66 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The rejection of claims 45 and 52 under 35 U.S.C. § 102(b) over U.S. Patent No. 1,864,011 to Brown.

4. The rejection of claims 58, 59, 62 and 63 under 35 U.S.C. § 103(a) over U.S. Patent No. 1,864,011 to Brown in view of U.S. Patent No. 5,009,008 to Yablonovitch or U.S. Patent No. 5,095,624 to Ennis.

5. The rejection of claims 54 and 60 under 35 U.S.C. § 103(a) over U.S. Patent No. 1,864,011 to Brown in view of U.S. Patent No. 5,131,149 to Thompson.[3]

6. The rejection of claim 66 under 35 U.S.C. § 103(a) over U.S. Patent No. 1,864,011 to Brown in view of U.S. Patent No. 5,009,008 to Yablonovitch or U.S. Patent No. 5,095,624 to Ennis and, if necessary, further in view of U.S. Patent No. 5,293,690 to Cassady or U.S. Patent No. 4,985,998 to Howard.

7. The rejection of claims 23-25, 27-29, 45, 52, 54, 58-60, 62, 63, 65 and 66 under 35 U.S.C. § 251 as being an improper recapture of surrendered subject matter.

VII. ARGUMENT

In the arguments that follow, when a specific passage of a U.S. patent is cited, it will be indicated by a column number separated from a line number by a colon.

A. Rejection of Claims 23-25, 27-29, 58-60, 62, 63, 65 and 66 Under 35 U.S.C. § 112, First Paragraph

Regarding Claims 23-25, 27-29 and 65

In rejecting claims 23-25, 27-29 and 65, the Examiner states that "the original disclosure does not provide support for the combination now set forth in claims 23 and 65 of: 'said blade having an aperture, and a blade pivot connected to said first end of said handle and extending through the aperture for pivotal movement of said blade about said blade pivot ....'

[3] The Final Office Action rejects claim 60 as unpatentable over U.S. Patent No. 1,864,011 to Brown in view of U.S. Patent No. 5,131,149 to Thompson; however, claim 58 from which claim 60 depends, was rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 1,864,011 to Brown in view of U.S. Patent No. 5,009,008 to Yablonovitch or U.S. Patent No. 5,095,624 to Ennis. Accordingly, Appellant believes the Examiner intended to reject claim 60 over U.S. Patent No. 1,864,011 to Brown in view of U.S. Patent No. 5,009,008 to Yablonovitch or U.S. Patent No. 5,095,624 as applied to claim 58 and further in view of U.S. Patent No. 5,131,149 to Thompson. Nonetheless, Appellant has set forth the grounds of rejection to be reviewed on appeal to mimic the rejections set forth in the Final Office Action and, to therefore comply with the request set forth in the Notification of Non-Compliant Appeal Brief mailed July 20, 2009.

Rather support is provided for the blade having *a pivot pin 56 that is connected to the first end of the handle for pivotal movement of said blade about said blade pivot* between an extended position and a retracted position." Final Office Action, page 3 (emphasis added) (attached hereto as Appendix B).

From this statement, it appears the Examiner agrees there is adequate support for "a blade pivot connected to said first end of said handle … for pivotal movement of said blade about said blade pivot" as recited in claims 23 and 65 (see also allowed claims 1, 11, 12 and 15), and thus takes issue only with the recitation of the blade "having an aperture." The blade B actually has three apertures. A first aperture 58 in the form of a slot, a second aperture 62 that receives pin 86 and a third aperture through which pin 56 extends, but this aperture cannot easily be seen in Figure 3 of the application (reproduced as Figure 8, below) because the pin 56 is in the aperture. While the text of the disclosure does not explicitly recite the pin 56 is in an "aperture," this is such a well known way to construct a knife that a person of skill in the art would not even need this to be disclosed: they would know it from looking at the figures and knowing basic knife operation and construction. This is also clear from the Figures. A review of Figure 8 below would indicate to one of skill in the art the only practical way for pin 56 to be extending from the center of the tang is for it to be through an aperture in the blade. In addition, the shading and interface angle between the blade B and the pin 56 also give an indication that it is a separate pin extending through an aperture and the blade was not molded or machined with this pin as an integral part of the blade. (While from a technology stand point, if a person had a 3D milling machine, it would be possible to make a blade with a protruding part, this is not how Figure 8 is shown. Indeed, the trouble and expense to make such a blade would be prohibitive.) Figures 4A-4C of the application (Figures 2-4, above), which have cross hatching on the pin, but not on the blade, also give an indication that the pin 56 is a separate piece that extends through an aperture. Again, every person in this art has the knowledge that a hole is provided in a blade to receive the pivot pin 56 since this has been basic knife construction for many years and a patent does not need to be a blueprint of every engineering detail that is known to those in the art. It would be clear to one of ordinary skill in the art from a review of the disclosure and the figures, particularly Figure 3 of the application (reproduced below as Figure 8), that in order for pivot pin 56 to traverse the blade B and engage holes 22, 48 in the handle portions 12, 14, it would be necessary to provide an aperture in said blade B. Thus, it would be clear to one of

ordinary skill in the art, at the time of filing the original application, that Applicant had possession of the claimed invention.

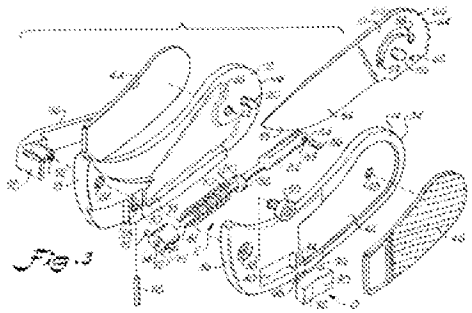

Figure 8
(Figure 3 of application)

Regarding Claims 58-60, 62, 63 and 66

In rejecting claims 58-60, 62, 63 and 66, the Examiner states that the "disclosure does not provide support for the ends of the biasing element (now interpreted by Appellant to be the spring 90) being coupled to the handle and blade respectively. That is, there is no single integral feature or plural integral features that couple(s) the end of the spring to the handle, or the end of the spring to the blade. Rather, both ends of the spring 90 are free and not coupled to anything. Further, the element that is coupled to the handle is pin 95 or the integral combination of pin 95 and sleeve or collar 92, wherein the sleeve or collar 92 is coupled to shaft 80, not to spring 90; similarly, the element that is coupled to the blade is pin 86 or the integral combination of pin 86 and yoke or clevis 82, wherein the yoke or clevis is coupled to shaft 80, not to spring 90." Final Office Action, pages 2 to 3.

In taking such a position, the Examiner takes a narrow view of "coupling," interpreting such language to include only direct connection of integral elements. The term "coupling," however, when given a reasonable interpretation in accordance with its plain meaning, includes the indirect connection of elements that may or may not be integral. Furthermore, in the context of the claims at issue, the recitation of a first coupling element and a second coupling element makes it clear that "coupling" does not refer solely to direct connection, but rather contemplates indirect connection through intermediate coupling elements.

The Examiner's statement that "the ends of the spring 90 are free and not coupled to anything" is inaccurate. If true, the spring 90 would fall from the knife during operation and thus be unable to fulfill the objectives set forth in the application, such as providing spring-

biased means for retaining a blade of a folding knife in a closed position (**1:65-67**). Rather, it is clear that the biasing element or spring 90 shown in the illustrated embodiment of Figures 2-4, above, is coupled to the blade B and handle to provide the necessary bias to hold the blade B in the retracted position, when the blade B is in the retracted position, and to assist in maintaining the blade B in the extended position, when the blade B is in the extended position.

A person having ordinary skill in the art would understand "coupling" to encompass both indirect and direct coupling unless clearly limited otherwise. Inclusion of "a first coupling element" and "a second coupling element" makes it clear that the biasing element of claims 58-60, 62, 63 and 66 is indirectly coupled to the blade and the handle via intermediate elements, such as, for example, yoke or clevis 82 and/or sleeve or collar 92 (see Figure 8, above). Still further, the addition of the modifier "operatively" makes it clear that coupling embraces the interaction of adjacent elements such that force or power is transmitted therebetween – one definition of "operative" being "exerting force, power, or influence." A review of the figures, in particular Figure 2, above, makes it clear that the bias element or spring 90 is coupled between the handle and blade to exert a force therebetween. Thus, it would be clear to one of ordinary skill in the art, at the time of filing the original application, that Applicant had possession of the claimed invention.

B. Rejection of Claims 58-60, 62, 63 and 66 Under 35 U.S.C. § 112, Second Paragraph

In rejecting claims 58-60, 62, 63 and 66, the Examiner states that the recitation "a contact pin" is vague and indefinite as to what disclosed structure is being referred. The Examiner further states that "the only disclosed 'pin' that appears to be coupled to the blade is either pin 20 or pin 56." Final Office Action, page 4.

The Examiner has overlooked pin 63' of Figure 8B (reproduced below as Figure 9) and corresponding disclosure at column 5, lines 40-45, which clearly disclose a pin 63' coupled to the blade B" such that a user can engage or contact the pin with his or her thumb or finger to open the blade B". The terms of art often used for such a pin 63' include thumb bob, thumb stud, and thumb pin. Such a thumb pin is known in the art as shown in Figure 8B of the application as filed (Figure 9, below). In light of such disclosure, claims 58-60, 62, 63 and 66 are not indefinite and therefore the rejection under 35 U.S.C. § 112, second paragraph should be withdrawn.

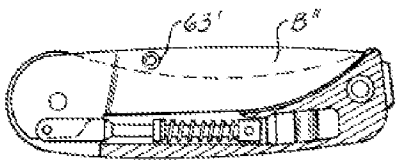

Fig. 8B

Figure 9
(Figure 8B of application)

C. Introduction to Claim Rejections Over Cited Art

Each of the appealed reissue claims that presently stand rejected over the art of record, have been rejected with primary reliance on U.S. Patent No. 1,864,011 to Brown (hereinafter "Brown"). However, as explained in more detail below, each such reissue claim is patentably distinct from the disclosure and teachings of Brown – Brown being drawn to a folding knife having extendable side plates that requires two hands to operate as summarized below with reference to Figures 10-12 (Figures 1-3 of Brown, respectively).

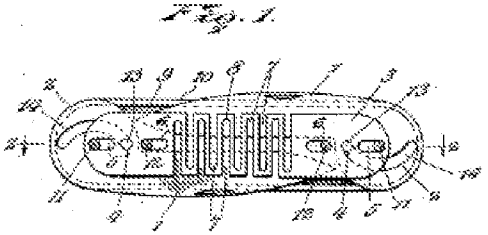

Figure 10
(Figure 1 of Brown)

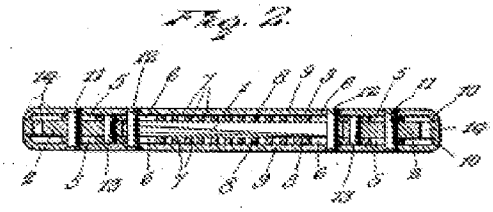

Figure 11
(Figure 2 of Brown)

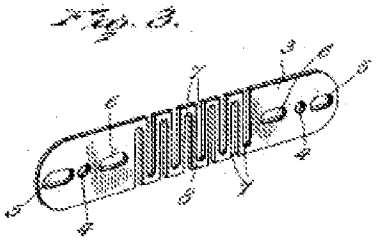

Figure 12
(Figure 3 of Brown)

As shown in the figures above, the pictured knife includes a conventional nail mark on each of two blades 1 that are pivotally coupled to a handle structure by pins 11, such nail marks being well known in the art for allowing a user to hold a knife with one hand while engaging the nail mark with a finger or thumb of the other hand to withdraw the knife blade.

Once a user begins to open either blade 1 via the nail mark, side plates 3 extend from an initial state via cam action of pins 13 with slots 14 formed in the tang of each blade 1. In this manner, the plates 3 act in a longitudinal direction throughout the duration of blade deployment, relying on the structure of slots 14 to provide a cam action transferring the compressive force developed in the plates 3 to resist closing or opening of the blade 1 (see Brown, page 2, lines 13-51).

Brown does not disclose or teach the various unique features of the present invention that allow for one-handed opening of a knife blade from a retracted position. The shortcomings of Brown with respect to various embodiments, as set forth in the pending reissue claims, are discussed in more detail throughout the following discussion.

D. Rejection of Claims 45 and 52 Over Brown

Regarding Claim 45

In the Final Office Action, the Examiner rejected claim 45 under 35 U.S.C. § 102(b) as being anticipated by Brown, stating that Brown discloses a folding knife with every structural limitation of the claimed invention. The Examiner points to the left portion of plate 3, or the right portion of plate 3 as the "plunger" of claim 45 and the intermediate portion or spring portion 8 of plate 3 as the "spring coupled to the plunger." In other words, the Examiner bifurcates unitary plate 3 to reach the conclusion that Brown discloses the structural limitation of "a spring coupled to the plunger." Such a construction impermissibly stretches the definition of "coupled" and ignores the clear recitation of separate and distinct elements. From the plain language of claim 45, it is clear that claim 45 embodies a concept in which the spring is a component that is physically separate from the plunger rather than of a unitary construction as required in Figures 1 and 3 of Brown (see Figures 10 and 12, above). For this reason alone, claim 45 is patentable over Brown.

Additionally, even when taking the Examiner's definition of plunger as "the left portion of 3, or the right portion of plate 3" (emphasis added) – a construction Appellant disagrees with – it is clear that Brown fails to disclose the structural limitation of "a plunger coupled between the handle and the blade such that a portion of the plunger remains a fixed distance from the blade pivot point." For example, with reference to Figure 10 (Figure 1 of Brown), if the plunger is the left portion of 3, then it is arguably coupled between the handle (*e.g.*, structure including 9, 10) and the left or lower blade 1 by left pins 11, 13. However, in

operation, the left portion of 3 does not remain a fixed distance from the blade pivot point (*e.g.*, pin 11), but instead, translates back and forth along left slot 5. Likewise, if the right portion of 3 is designated as the plunger, it is arguably coupled to the right or upper blade 1 by right pins 11, 13, and in operation translates back and forth along right slot 5 and thus does not remain "a fixed distance from the blade pivot point" as required by claim 45. Thus, for this additional reason, claim 45 is patentable over Brown.

Regarding Claim 52

In the Final Office Action, the Examiner rejected claim 52 under 35 U.S.C. § 102(b) as being anticipated by Brown, stating that Brown discloses a folding knife with every structural limitation of the claimed invention. The Examiner points to spring portion 8 of plate 3 as the "biasing means" and points to the conventional nail mark of Brown (*e.g.*, the notch located on the blade between numerals 1 and 7) as the "moving means for moving the blade from the retracted position to the extended position with one hand while holding the knife with the same one hand," stating that the "notch can clearly be accessed by a finger of a user's hand and pushed toward an open/extended position while the user is holding the knife in the same hand." Final Office Action, page 6. Appellant strongly disagrees.

With respect to "moving means," the Examiner's construction of Brown contradicts the conventional use of nail marks to open knife blades, is incompatible with the structure disclosed in Figure 1 of Brown, and is inconsistent with the anatomy of the human hand. The use of a conventional nail mark with folding knives is well known in the art and provides means for opening a knife blade with a hand <u>opposite</u> the hand holding the knife. In operation, a right handed user holds a conventional pocket knife in his or her right hand with the handle facing towards the user's palm. Then the user pinches the knife blade with his or her left thumb and left forefinger while inserting a nail of his or her left forefinger or thumb in the nail mark. Using the nail mark and pressure from pinching the blade, the user is able to open the blade against whatever resistance may be holding the blade closed.

This method is confirmed when viewing the nail mark of Brown which shows the nail mark having a curvature to match a user's nail such that the nail must be inverted to engage the notch – a feat only possible when using a nail of a hand <u>opposite</u> the hand that holds the knife. Additionally, as shown in Figure 10 (Figure 1 of Brown), the notch is in such close proximity to the handle (see hidden line of flange 10 which nearly touches the nail mark) that a

user would not be able to engage the nail mark (even if inverted to receive a nail) with a hand that is holding the knife because the handle (*e.g.*, structure including flange 10) would interfere with the user's finger or thumb and prevent engagement. If a person is using the thumb nail of the opposite hand, there is no clearance needed since the nail itself is the outside most part of the thumb and can easily contact the nail mark; but from the other side, using the hand holding the knife, the thumb gets in the way and prevents the nail from reaching the nail mark of Brown since his knife does not provide clearance for such a position. Still further, the proffered construction of Brown ignores the anatomy of the human hand. As shown in Figure 10 (Figure 1 of Brown), to engage the nail mark it is necessary to insert a nail parallel to the handle of the blade. When grasping the knife in a user's hand it is impossible to position a nail of a finger or a thumb of the same hand in such a position to effectively open the blade.

Of perhaps the most importance is that nowhere does Brown suggest or assert that a user can open his knife with one hand. The idea that this is possible is merely hindsight reconstruction by the Examiner from reading Applicant's own disclosure. Since the text and teachings of Brown do not state or show that his knife can be opened with one hand, this feature cannot be relied upon as being taught by Brown as a basis for the rejection. The Examiner attempts to create this rejection by extrapolating from what Brown clearly teaches and to do so, relies only on what the Applicant himself taught. Surely, if Brown had invented a knife that could be opened with one hand, he would have said something about this in his disclosure; he clearly did not. His knife cannot be opened with one hand and requires two hands.

Further, the knife of Brown requires that the blade extend beyond a perpendicular position before plate 3 can assist in opening the blade. Thus, even if the disclosed nail mark were inverted, moved further from the handle to provide clearance for a user's nail, and the user was able to defy nature to position a thumb or finger to initially engage the nail mark, the user would not have the range of motion (let alone the strength) necessary to reach the perpendicular blade position to open the blade. Thus, contrary to the Examiner's assertion, it is clear that the nail mark of Brown cannot be accessed by a finger or thumb of a user's hand and pushed toward an open/extended position while the user is holding the knife in the same hand. For this reason, claim 52 is patentable over Brown.

Furthermore, claim 52 is patentable over Brown because the biasing is claimed in means-plus-function format (*i.e.*, "biasing means for holding the blade ..."). Based on *In re*

Donaldson, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994), this claim covers the embodiments disclosed in the specification and equivalents thereof. The structure of Brown is markedly different from the structure of the biasing means as disclosed in the application as filed and can not be considered an equivalent structure. As shown in Figure 10 (Figure 1 of Brown), Brown uses a solid flat plate 3 having a rectangular spring portion 8 that serves as an extension spring for biasing the blades 1 via cam action of arcuate slots 14 interacting with pins 13. The plate 3 of Brown functions as an extension spring and thus undergoes tensile axial loading during operation of the knife, such loading acting at all times in a direction in line with the pivot points of the knife blades 1 (*i.e.*, axis of pins 11). The plate 3 therefore pulls on pins 13 which ride within slots 14 setting up a cam action which pulls the blade(s) 1 shut when the blade(s) 1 are in a position less than perpendicular to the handle and pulls the blade(s) open when in a position greater than perpendicular to the handle (*i.e.*, plate 3 undergoes tensile loading and pulls the blade(s) shut and open, respectively). This is markedly different from the biasing means of the present invention, which includes a coil spring positioned around a plunger, the coil spring undergoing variable compressive loading, and in operation pushing the blade shut when the blade is in a position less than an intermediate position and pushing the blade open when the blade is in a position greater than an intermediate position (*i.e.*, spring 90 undergoes compressive loading and pushes the blade shut and open, respectively). Thus, the structure of Brown does not perform substantially the same function of the biasing means of the present invention in substantially the same manner and therefore cannot be considered an equivalent thereof. Claim 52 should therefore additionally be allowed on the basis of *In re Donaldson* and the means-plus-function formatting of the claim element.

E. Rejection of Claims 58, 59, 62 and 63 Over Brown in View of U.S. Patent No. 5,009,008 to Yablonovitch or U.S. Patent No. 5,095,624 to Ennis

Regarding Claim 58

In the Final Office Action, the Examiner rejected claim 58 under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of U.S. Patent No. 5,009,008 to Yablonovitch (hereinafter "Yablonovitch") or U.S. Patent No. 5,095,624 to Ennis (hereinafter "Ennis"), stating that Brown discloses almost every structural limitation of the claimed invention and that Yablonovitch or Ennis disclose the element that Brown lacks – a contact pin. Final Office Action, pages 6-8. In making this rejection the Examiner points to the center portion of plate 3

(*i.e.*, spring portion 8) as "the biasing element including a spring," the leftmost portion of plate 3 as the "the first coupling element," and the rightmost portion of plate 3 as the "the second coupling element." In other words, the Examiner dissects unitary plate 3 into three regions to reach the conclusion that Brown discloses the structural limitations of "a first coupling element operatively coupling a first end of the biasing element to the handle; and a second coupling element operatively coupling a second end of the biasing element to the blade." Such a construction ignores the clear recitation of separate and distinct elements. From the plain language of claim 58, it is clear that claim 58 embodies a concept in which the biasing element including a spring is a component that is physically separate from the first coupling element and physically separate from the second coupling element rather than of a unitary construction. For this reason alone, claim 58 is patentable over Brown in view of Yablonovitch or Ennis.

Furthermore, even if Yablonovitch or Ennis generally disclose the use of a contact pin to facilitate one-handed opening of a knife blade, the structure disclosed in Yablonovitch and in Ennis is not compatible with the knife of Brown, and thus one skilled in the art would not look to Yablonovitch or Ennis to modify the knife of Brown as indicated. As shown in Figure 10 (Figure 1 of Brown), a compact knife is shown having two foldable blades 1 that extend from a common handle (*e.g.*, structure 9 and 10). In the retracted positions, the blades 1 are received nearly entirely within the knife handle such that there is no room to couple the finger actuator of Yablonovitch or a similar structure of Ennis to either blade. Nor would it be obvious to modify the knife of Brown to provide such a mounting location. As shown, the knife blades 1 of Brown remain substantially within the handle so that a user may operate the knife with one blade extended and the other retracted. If the finger actuator of Yablonovitch, for example, were added to either blade of Brown, it would interfere with grasping the knife and cause injury to a user's hand during operation. Thus, even if Brown disclosed all other structural limitations of claim 58 (which it does not), it would not be obvious to modify the knife of Brown to add the finger actuator of Yablonovitch (or a similar structure of Ennis). For this additional reason, claim 58 is patentable over Brown in view of Yablonovitch or Ennis.

A further shortcoming is that none of the prior art references cited by the Examiner in the rejection of this claim permits a user to hold the knife in one hand and apply an opening force of the blade using a thumb or finger of the same hand. This is a main point of this invention; this feature is entirely missing from the prior art. The Examiner did not address this

point in his rejection: he cannot; it is missing from the teachings of the prior art used. (The Thompson patent, 5,131,149, does propose to teach a knife that can be opened by one hand, but its teachings and construction are so different from the present invention and the cited prior art knives that the Examiner did not use that art in the rejection of independent claims 58, 62 and 63. This is because the Examiner himself recognized that such a combination was inappropriate.)

The Examiner has ignored the limitation of claim 58 that "a user holding the knife in one hand, can apply an opening force to the blade with a thumb or finger of the same hand." This is inappropriate since this is a structural limitation of the contact pin that is a recited element of this claim. This feature of the contact pin that is positioned such that a user can open the knife with one hand should be given appropriate weight and dealt with by the Examiner with a prior art showing if one can be made; one cannot be made. There is no knife of the prior art with this claimed combination of a thumb pin (called a contact pin in the claims) with the biasing element and coupling elements that would permit a knife to be opened with one hand. As previously pointed out, even if a contact pin were provided in Brown, and even if a place could be found to put this pin, it could not be in a position that would permit a user to open the blade with one hand. The blade of Brown needs to go past the halfway point before the spring will start to open the knife. By this time, any contact pin on the blade will be well out of reach of the thumb of a user and they would no longer be able to use their thumb to push the blade while still holding the knife. Such a thumb pin, even if put on Brown, could not be positioned relative to his spring and blade such that a user could open the knife with one hand.

As previously pointed out, the Examiner did not assert that this claimed feature was even present in the rejection made; for this reason alone, in addition to the reasons already provided, claim 58 should be allowed.

Regarding Claim 59

Claim 59 is allowable at least for being dependent from allowable independent claim 58 as discussed above. In addition, claim 59 recites the additional limitation "wherein the biasing element is arranged such that the spring thereof increases in tension to a point of maximum tension as the blade is moved through the arc from the retracted position toward the extended position, then decreases in tension as the blade continues past the point of maximum tension toward the extended position." Neither Brown nor Yablonovitch or Ennis disclose such a feature.

The Examiner points to the spring portion 8 of plate 3 as the biasing element that meets this additional limitation of claim 59. Final Office Action, page 7. The Examiner, however, overlooks the fact that the spring portion of plate 3 acts as an extension spring and thus undergoes tensile loading such that the spring portion 8 of plate 3 increases in compression (as opposed to tension) as it is stretched. This action is directly opposite the action of the biasing element as recited in claim 59. In other words, the arrangement of the spring portion 8 of plate 3 is such that the spring portion 8 is never compressed and therefore does not experience the increase and subsequent decrease in tension as claimed. For this additional reason, claim 59 is patentable over Brown in view of Yablonovitch or Ennis.

Regarding Claim 62

In the Final Office Action, the Examiner rejected claim 62 under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Yablonovitch or Ennis. Claim 62, however, contains a particular element which is neither found in nor obvious from Brown or a combination of Brown and Yablonovitch or Ennis. Claim 62 specifies that the biasing element, including the spring, applies "a closing force to the blade while the blade is in the retracted position." This feature, of the spring providing a closing force while the blade is in the retracted position, is not disclosed or taught by Brown or a combination of Brown and Yablonovitch or Ennis.

Rather, as shown in Figure 10 (Figure 1 of Brown), when in the closed position, the plate 3 (having spring portion 8) is restrained axially by pins 11 and 12 in engagement with end portions of slots 5 and 6. In this configuration, the blade 1 does not experience any spring force from plate 3, such force, if any, being held by pins 11 and 12. It is not until a user partially opens the blade 1 and causes the arcuate slot 14 on the blade 1 to engage and pull pin 13 toward the pivot point (*i.e.*, pin 11) that a resistive force is set up between the blade 1 and the plate 3. When releasing the blade 1 from this partially open state, plate 3 retracts pulling pin 13 against the arcuate slot 14, and thereby pulls the blade 1 toward the retracted position until the plate 3 comes to rest via contact of slots 5 and 6 with pins 11 and 12. Again, once in the retracted state, any spring force that may be present in plate 3 is held by pins 11 and 12 and is not applied to the blade 1. Having a pressing force when closed is a unique feature which was provided in the present invention and is a specific benefit which was repeatedly explained in the application as filed. See, for example, the patent as issued, column 1, last few lines, and other places in the specification which state that the spring provides a closing force on the blade when it is in the

fully retracted position. This feature of claim 62 is therefore not in the cited art and should be allowed.

Regarding Claim 63

In the Final Office Action, the Examiner rejected claim 63 under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Yablonovitch or Ennis, stating that Brown discloses almost every structural limitation of the claimed invention and that Yablonovitch or Ennis disclose the element that Brown lacks – a contact pin. Final Office Action pages 6-8.

As discussed above with respect to claim 58, Brown fails to disclose, teach or otherwise suggest a knife in which the "biasing element including a spring" is a component that is physically separate from the first coupling element and physically separate from the second coupling element. For this reason alone, claim 63 is patentable over Brown in view of Yablonovitch or Ennis. Additionally, also as discussed above with respect to claim 58, modifying the knife of Brown to add the finger actuator of Yablonovitch (or a similar structure of Ennis) would render the knife of Brown impractical for its intended purpose by interfering with a user's ability to comfortably grasp and operate the knife. For this additional reason, claim 63 is patentable over Brown in view of Yablonovitch or Ennis.

F. Rejection of Claims 54 and 60 Over Brown in View of U.S. Patent No. 5,131,149 to Thompson

Claim 54 is allowable at least for being dependent from allowable independent claim 52 as discussed above.

Claim 60 is allowable at least for being dependent from allowable independent claim 58 as discussed above.

G. Rejection of Claim 66 Over Brown in View of Yablonovitch or Ennis and, if Necessary, Further in View of U.S. Patent No. 5,293,690 to Cassady or U.S. Patent No. 4,985,998 to Howard.

Despite the indication on page 13 of the Final Office Action that claim 66 reads over the prior art of record, the Examiner has nevertheless rejected claim 66 as being unpatentable over Brown in view of Yablonovitch or Ennis and, if necessary, further in view of U.S. Patent No. 5,293,690 to Cassady (hereinafter "Cassady") or U.S. Patent No. 4,985,998 to Howard (hereinafter "Howard").

As noted by the Examiner, claim 66 is substantially similar to claim 63 with the addition of a locking member as claimed at the end of claim 66. Thus, claim 66 is allowable over the cited art for the reasons set forth above with respect to claim 63 (and thus by reference to claim 58). Additionally, claim 66 is allowable over the cited art because the Examiner has failed to suggest or provide any indication of how the locking mechanisms of Ennis, Cassady or Howard could be incorporated with the knife of Brown to render claim 66 obvious.

A review of the locking mechanisms of Ennis, Cassady and Howard show that each is incompatible with the knife design of Brown. For example, Ennis discloses the use of a T-shaped toggle 44 pivotally mounted to the back of the knife and extending along a length thereof such that it would interfere with operation of the blades 1 of Brown as well as the translation of plate 3 (see, *e.g.*, Figure 5 of Ennis, reproduced below as Figure 13). Likewise, Howard discloses the use of a locking bar 14 that is also pivotally mounted to the back of the knife at 24 and extending along a length thereof such that it would interfere with operation of the blades 1 of Brown as well as the translation of plate 3 (see, *e.g.*, Figure 1 of Howard, reproduced below as Figure 14). Additionally, the release lever 16 of Howard would similarly interfere with the translation and hence operation of plate 3 of Brown. The locking mechanism of Cassady requires a crossbolt slot 32 concentric with a pivot point of the knife blade 50 in the handle plates 30, 40 for receiving a crossbolt 1 (see Figures 2, 5 and 7 of Cassady, reproduced below as Figures 15-17, respectively). In operation, the crossbolt 1 swings through the entire range of the crossbolt slot 32, and thus if incorporated in the knife of Brown, would sweep through plate 3 rendering the device inoperable. In sum, none of the locking mechanisms are compatible with the knife disclosed in Brown and therefore cannot be combined therewith. Thus, claim 66 cannot be an obvious combination of Brown in view of Yablonovitch or Ennis and, if necessary, further in view of Cassady or Howard.

Locking Mechanism of Ennis:

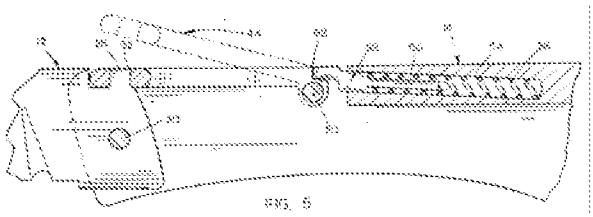

Figure 13
(Fig. 5 of Ennis)

Locking Mechanism of Howard:

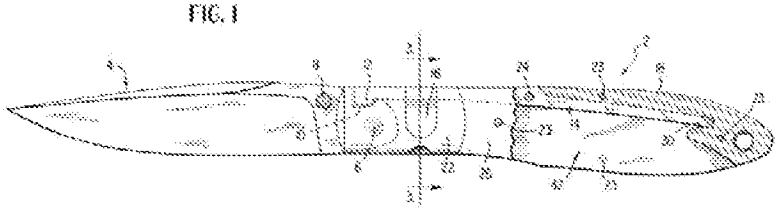

Figure 14
(Fig. 1 of Howard)

Locking Mechanism of Cassady:

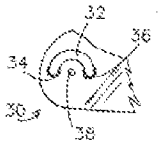

Fig. 2

Figure 15
(Fig. 2 of Cassady)

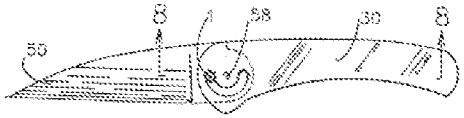

Fig. 5

Figure 16
(Fig. 5 of Cassady)

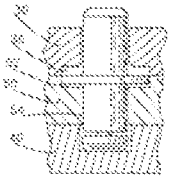

Fig. 7

Figure 17
(Fig. 7 of Cassady)

H. Rejection of Claims 23-25, 27-29, 45, 52, 54, 58-60, 62, 63, 65 and 66 Under 35 U.S.C. § 251

Analytic Framework of Rule Against Recapture

As outlined in the seminal case of *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997), and as adopted and applied in the precedential opinion of *Ex Parte*

Eggert, 67 USPQ2d 1716, 1730-32 (Bd. Pat. App. & Inter. 2003), application of the rule against recapture comprises a multiple step process as set forth below.

Step 1: The first step in applying the recapture rule is to determine whether and in what "aspect" the reissue claims are broader than the issued patent claims. *Clement*, 131 F.3d at 1468.

Step 2: The second step is to determine whether the broader aspects of the reissue claims relate to surrendered subject matter, looking to the prosecution history for arguments and changes made in an effort to overcome a prior art rejection. *Id.* at 1468-69.

Step 3: The third step is to determine whether any surrendered subject matter has crept into the reissue claim. *Id.* at 1469. In accordance with step 3, the following principles apply:

> (1) if the reissue claim is as broad as or broader than the canceled or amended claim in all aspects, the recapture rule bars the claim;
>
> (2) if [the reissue claim] is narrower [than the canceled or amended claim] in all aspects, the recapture rule does not apply, but other rejections are possible; and
>
> (3) if the reissue claim is broader [than the canceled or amended claim] in some aspects, but narrower in others, then:
>
> > (a) if the reissue claim is as broad as or broader in an aspect germane to a prior art rejection, but narrower in another aspect completely unrelated to the rejection, the recapture rule bars the claim;
> >
> > (b) if the reissue claim is narrower in an aspect germane to [the] prior art rejection, and broader in an aspect unrelated to the rejection, the recapture rule does not bar the claim, but other rejections are possible.

Id. at 1470. *See Eggert*, 67 USPQ2d at 1732. *See also MBO Laboratories, Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1332, 81 USPQ2d 1661 (Fed. Cir. 2007) (noting that required analysis in recapture case is described in depth in *Clement*).

Step 1: What "aspect(s)" of the reissue claims are broader than the issued patent claims

To determine what "aspect(s)" of the reissue claims are broader than the patent claims it is necessary to compare the issued patent claims to the presently appealed reissue claims. A comparison of reissue claim 23 and issued claim 1 is provided below as illustrative of

the necessary comparison. See Chart 1, below, comparing elements of issued claim 1 (left column) to independent reissue claim 23 (center column) to determine whether and in what aspects reissue claim 23 is broader than issued claim 1 (right column).

Chart 1 – Comparison of Issued Claim 1 and Reissue Claim 23

Claim 1	Reissue Claim 23	Broader Aspects
a handle defining a blade cavity and a first end;	a handle having a blade cavity and a first end;	No broader aspects.
a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for pivotal movement of said blade about said blade pivot between an extended position wherein the blade is outside of said blade cavity and a retracted position wherein the blade is substantially within said blade cavity;	a blade having a first end and a second end opposite said first end, said first end of said blade having an aperture; a blade pivot connected to said first end of said handle and extending through the aperture for pivotal movement of said blade about said blade pivot between an extended position wherein the blade is outside of said blade cavity and a retracted position wherein the majority of the blade is within said blade cavity; and	No broader aspects.
a longitudinally extending plunger carried in said blade cavity having a first end and second end opposite said first end; a pivotal connector pivotally connected to said handle for pivotally connecting said plunger to said handle, said first end of said plunger being longitudinally slidably carried by said pivotal connector for longitudinal movement of said plunger relative to said pivotal connector as said blade moves between said retracted and extended positions; and said second end of said plunger being pivotally connected to said first end of said blade for orbital movement about said blade pivot	a plunger including a spring, the plunger pivotally connected to the blade at a first end, and pivotally coupled to the handle at a second end, the spring being maximally deformed when the blade is pivoted to an intermediate point between the extended position and retracted position, thereby causing the spring to assist opening of the blade when the blade is pivoted from the retracted position toward the extended position beyond the intermediate point.	Broader in aspect related to elimination of plunger being longitudinally extending. Broader in aspect related to elimination of plunger located in blade cavity. Broader in aspect related to lack of positive recitation of pivotal connector. Broader in aspect related to elimination of plunger being

Claim 1	Reissue Claim 23	Broader Aspects
as said blade moves between said retracted and extended positions.		longitudinally slidably carried by a pivotal connector.

As can be appreciated from the above analysis, Step 1 reveals that independent reissue claim 23 is broader than issued claim 1 in several aspects. A review of the other pending reissue claims reveals similar findings, the results of which are not provided at this point for brevity. A summary of broadened aspects, however, is provided below in Charts 3-10 (right column) in accordance with Step 3 of the recapture analysis.

Of particular note in the comparison above is the broader aspect related to the elimination of the plunger being longitudinally slidably carried by a pivotal connector, which the Examiner has identified as a surrender-generating limitation. See Final Office Action, page 12. While the elimination of the plunger being longitudinally slidably carried by a pivotal connector broadens each of the reissue claims now under appeal, this aspect (as discussed in more detail below) does not relate to surrendered subject matter and therefore does not trigger application of the recapture rule.

Step 2: Determine whether the broader aspects relate to surrendered subject matter

In accordance with Step 2, it is critically important to determine what is "surrendered subject matter," as the "recapture rule does not apply in the absence of evidence that the applicant's amendment was 'an admission that the scope of that claim was not in fact patentable.'" *Clement*, 131 F.3d at 1469. This requires looking at the prosecution history of the original application and amendments made to the original claims in response to prior art rejections. Therefore, to properly determine "surrendered subject matter" it is necessary to analyze claim amendments in the context of the cited art. The following background of FR 1,171,740 to Pradel (hereinafter "Pradel") is thus provided, as it was the sole reference in light of which subsequent claim amendments were made during prosecution of original claim 1.

Brief Summary of Pradel

The following summary is provided with reference to Figures 18-22 provided below, which correspond to Figures 1 and 4-7 of Pradel, respectively.

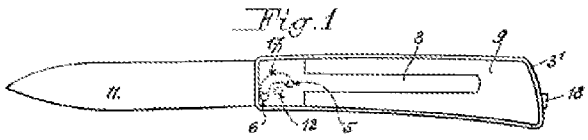

Figure 18
(Fig. 1 of Pradel)

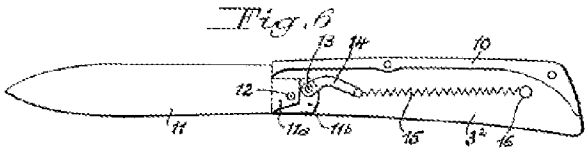

Figure 21
(Fig. 6 of Pradel)

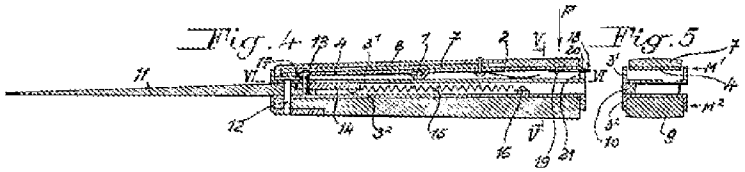

Figure 19
(Fig. 4 of Pradel)

Figure 20
(Fig. 5 of Pradel)

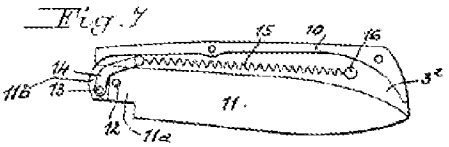

Figure 22
(Fig. 7 of Pradel)

As shown in a review of the figures above, Pradel discloses an automatic knife (*i.e.*, switchblade) having a blade 11 pivotally coupled to a knife handle M^1, M^2 at pivot axis 12 for pivotal movement of the blade 11 from a retracted position (Figure 22) to an extended position (Figure 21). In the retracted position, the blade 11 is held in place by engagement of pin 13 with hole 6 in plate 4, wherein plate 4 is part of a mobile handle portion of handle M^1. Pin 13 holds the blade 11 in the retracted position against the biasing force of extension spring 15, the extension spring 15 pivotally connected at a first end 16 to the handle M^2 and connected at a second end to a connecting rod 14. When in the extended position, pin 13 engages hole 5 (rather than hole 6) and locks the blade 11 in the extended position until a user releases the pin 13 by applying pressure F to the mobile handle portion. When the mobile handle portion is depressed while in the extended state, a user is able to manually close the knife blade 11 against the biasing force of the extension spring 15.

In operation, the knife blade 11 is deployed in an automatic fashion without manual movement of the blade 11 (*e.g.*, as in a switchblade) – a feature illegal in many countries. To release the knife blade 11 from the retracted position, a user applies pressure F to the mobile handle portion of handle M^1, the mobile handle portion then pivots about transverse axis 1 against a bias force applied by spring 2. Thus, as pressure F is applied, hole 6 located on an end of the mobile handle portion disengages pin 13 releasing the blade 11 which is then deployed via the potential energy stored in extension spring 15. The extension spring 15 retracts during deployment, pulling on connecting rod 14 and hence blade 11, thus extending the blade 11 to the

extended position. In the extended position, the extension spring 15 continues to apply a pulling force on the connecting rod 14 and hence blade 11.

As can be appreciated from the description above, the extension spring 15 of Pradel does not retain the knife blade 11 in the closed position, but rather applies an opening or pulling force to the blade 11 throughout the range of motion of the blade 11. The extension spring 15 does not experience maximum deformation at an intermediate blade position, nor does the extension spring 15 experience an effective decrease in length and increase in length during deployment of the blade 11. Rather, the extension spring 15 undergoes only an effective decrease in length as the blade 11 pivots from the retracted position to the extended position.

Thus, as discussed in further detail below, various characteristics of the reissue claims are patentably distinct from the automatic knife disclosed in Pradel, and are therefore materially narrowed in aspects germane to the rejection in the original application.

Prosecution History of Claim 1 – Identifying Surrendered Subject Matter

Having provided a brief summary of the art cited in rejecting originally filed claim 1 as background (*i.e.*, Pradel), the analysis now turns to a review of the prosecution history of claim 1.

Claim 1 as originally filed is provided in Chart 2 below (left column) and is compared to claim 1 as amended on October 24, 1997 in response to rejections under 35 U.S.C. § 112 and 35 U.S.C. § 102(b) over Pradel (middle column). See Office Action, mailed July 24, 1997 (attached hereto as Appendix C). Modifications to claim 1 in response to prior art rejections are highlighted in bold text, whereas other clarifying amendments made in response to 35 U.S.C. § 112 rejections are italicized and noted with "112" in superscript to distinguish such amendments. See Interview Summary dated October 16, 1997 and Amendment, dated October 24, 1997 (attached hereto as Appendices D and E, respectively). Further comparison is provided to issued claim 1 (right column) noting additional clarifying amendments made to address concerns under 35 U.S.C. § 112. See Examiner Interview Summary, dated January 19, 1998 (attached hereto as Appendix F).

Chart 2 – Amendments to Original Claim 1

Original Claim 1	Claim 1 as Amended 10-24-97	Issued Claim 1
A folding knife, comprising:	A folding knife, comprising:	A folding knife, comprising:
a handle defining a blade cavity and a first end;	a handle defining a blade cavity and a first end;	a handle defining a blade cavity and a first end;
a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for allowing pivotal movement of said blade about said blade pivot between an extended position outside of said blade cavity and a retracted position substantially within said blade cavity;	a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for pivotal movement of said blade about said blade pivot between an extended position *wherein the blade is*[112] outside of said blade cavity and a retracted position *wherein the blade is*[112] substantially within said blade cavity;	a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for ~~*allowing*~~[112] pivotal movement of said blade about said blade pivot between an extended position wherein the blade is outside of said blade cavity and a retracted position wherein the blade is substantially within said blade cavity;
a spring biased plunger carried in said blade cavity having a first end and second end opposite said first end;	a spring biased plunger carried in said blade cavity having a first end and second end opposite said first end;	a *longitudinally extending* ~~*spring biased*~~[112] plunger carried in said blade cavity having a first end and second end opposite said first end;
said first end of said plunger including a pivotal connector pivotally connecting said plunger to said handle;	~~**said first end of said plunger including**~~ a pivotal connector **connected to said handle** pivotally connecting said plunger to said handle,	a pivotal connector *pivotally*[112] connected to said handle *for*[112] pivotally connecting said plunger to said handle,
	said first end of said plunger being slidably carried by said pivotal connector as said blade moves between said retracted and extended positions;	said first end of said plunger being *longitudinally*[112] slidably carried by said pivotal connector *for longitudinal movement of said plunger relative to said pivotal connector*[112] as said blade moves between said retracted and extended positions;
said second end of said plunger being pivotally connected to said first end	said second end of said plunger being pivotally connected to said first end of said blade for orbital	said second end of said plunger being pivotally connected to said first end of

Original Claim 1	Claim 1 as Amended 10-24-97	Issued Claim 1
of said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended position.	movement about said blade pivot as said blade moves between said retracted and extended position.	said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended position**s**[112].

As can be appreciated from the comparison above, a single amendment was made to claim 1 in response to a prior art rejection, with subsequent clarifying amendments addressing concerns with respect to 35 U.S.C. § 112. The substantive amendments in response to the prior art rejection can be summarized as (i) separating the single limitation of "a plunger including a pivotal connector" into two limitations (hereinafter "pivotal connector separation refinement"), and (ii) further defining the connection of the first end of the plunger (hereinafter "plunger connection refinement") (see bold text in Chart 2, above).

To reiterate, the substantive amendments identified in bold text in Chart 2 were made in response to a single rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Pradel. See Office Action, mailed July 24, 1997 (attached hereto as Appendix C). The Examiner specifically stated at page 6 of the July 24, 1997 Office Action:

> FR '740 discloses a folding knife with every structural limitation of the claimed invention including a spring-biased plunger (14, 15) which is pivotally connected to the housing (at 16) and pivotally connected to the first end of the blade (at 13), and a clip (18).

As can appreciated from this rejection, the original Examiner interpreted the device of Pradel to include a "spring-biased plunger … including a pivotal connector" as recited in original claim 1, the "spring-biased plunger … including a pivotal connector" including the connecting rod 14, extension spring 15, and pivotal connector at 16. See Figure 23, below.

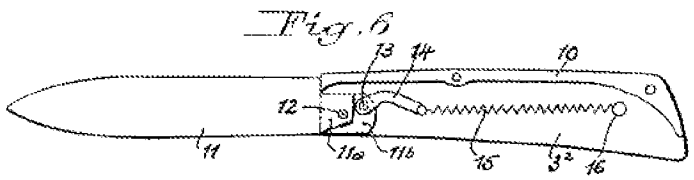

Figure 23
(Figure 6 of Pradel)

In response to this rejection, Applicant submitted an amendment adding the "pivotal connector separation refinement" and the "plunger connection refinement," discussed above. See Amendment, dated October 24, 1997 (attached hereto as Appendix E). This amendment is significant to the present analysis because such an amendment is often interpreted as an admission that the claim prior to amendment (*i.e.*, originally submitted claim 1) was not patentable over the cited art, namely Pradel. Thus, Applicant has presumably surrendered the subject matter of original claim 1, which can be summarized generally as:

> A folding knife having a blade, a handle and a spring-biased plunger having a pivotal connector, the plunger pivotally connected at a first end to the handle and pivotally connected at a second end to the blade.

This is the general scope of claim 1 as originally filed and is the scope surrendered in view of the amendment made to overcome the rejection of claim 1 as being anticipated by Pradel.[4] Thus, as long as this broad embodiment is not recaptured in its original scope (*i.e.*, without further limitations germane to the prior art rejection), then surrendered subject matter has not been improperly recaptured.

Step 3: Has Surrendered Subject Matter Crept Into the Reissue Claims?

Having defined the surrendered subject matter, it is necessary to determine whether the broader aspects of the reissue claims relate to surrendered subject matter in accordance with Step 2, and if so, determine whether any surrendered subject matter has crept into the reissue claims in accordance with Step 3. To facilitate such an analysis, a comparison of the surrendered claim scope (*i.e.*, original claim 1) with each of the appealed independent reissue claims is provided below in Charts 3-10. The elements of original claim 1 (*i.e.*, the elements defining the scope of surrendered subject matter) are provided in the left column with elements of the appealed independent reissue claims in the middle column, and "broader aspects"

[4] Appellant notes there is a fundamental disagreement between members of the Board regarding application of the recapture rule, specifically with respect to defining the scope of surrendered subject matter in light of amendments made during prosecution to distinguish over prior art. *See Ex Parte Browning*, Appeal No. 2007-0700, at 50 (Bd. Pat. App. & Inter. June 20, 2007) ("As this case demonstrates, there is a good faith debate among the judges of the Board of Patent Appeals and Interferences on how recapture issues should be resolved when, as here, there is a broadening and narrowing limitation in a claim sought to be reissued vis-à-vis a patent claim narrowed in the face of a prior art rejection during prosecution of the application that matured into the patent.") (Judge McKelvey concurring) (non-precedential decision). However, as discussed in further detail later in this brief, *Clement* and *Eggert* remain binding precedent on the Board and clearly define surrendered subject matter in terms of the scope of the claim prior to amendment.

incorporated from Step 1 are provided in the right column. Those broader aspects identified in Step 1 that do not relate to surrendered subject matter (*i.e.*, the scope of original claim 1) are identified by strikethrough text.

Chart 3 – Comparison of Original Claim 1 and Reissue Claim 23

Original Claim 1	Reissue Claim 23	Broadened Aspects from Step 1
A folding knife, comprising:	A folding knife, comprising:	
a handle defining a blade cavity and a first end;	a handle having a blade cavity and a first end;	No broader aspects.
a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for allowing pivotal movement of said blade about said blade pivot between an extended position outside of said blade cavity and a retracted position substantially within said blade cavity;	a blade having a first end and a second end opposite said first end, said first end of said blade having an aperture; a blade pivot connected to said first end of said handle and extending through the aperture for pivotal movement of said blade about said blade pivot between an extended position wherein the blade is outside of said blade cavity and a retracted position wherein the majority of the blade is within said blade cavity; and	No broader aspects.
a spring biased plunger carried in said blade cavity having a first end and second end opposite said first end; said first end of said plunger including a pivotal connector pivotally connecting said plunger to said handle; said second end of said plunger being pivotally connected to said first end of said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended position.	a plunger including a spring, the plunger pivotally connected to the blade at a first end, and pivotally coupled to the handle at a second end, the spring being maximally deformed when the blade is pivoted to an intermediate point between the extended position and retracted position, thereby causing the spring to assist opening of the blade when the blade is pivoted from the retracted position toward the extended position beyond the intermediate point.	~~Broader in aspect related to elimination of plunger being longitudinally extending~~. Broader in aspect related to elimination of plunger located in blade cavity. Broader in aspect related to lack of positive recitation of pivotal connector. ~~Broader in aspect related to elimination of plunger being longitudinally slidably carried by a pivotal connector~~.

As can be seen in Chart 3 above, only two of the broadened aspects identified in Step 1 arguably relate to surrendered subject matter: (i) the elimination of the "plunger carried in said blade cavity," and (ii) the elimination of "said plunger including a pivotal connector." However, these broadened aspects are unrelated to the prior art rejection as the addition of such features would not distinguish the present invention over the knife disclosed in Pradel. For example, elimination of the limitation that the plunger is carried in a blade cavity (which broadens reissue claim 23 in that aspect) is not relevant to the prior art rejection because Pradel includes a plunger assembly carried in a blade cavity and such a limitation was not and has not been relied upon to distinguish reissue claim 23 over Pradel. *See Eggert*, 67 USPQ2d at 1731 (finding that omitted features, which were not argued by appellants as distinguishing over the applied prior art and which appeared to be fully met by the same, were not germane to the prior art rejection) (precedential).

Conversely, reissue claim 23 includes a narrowing aspect relevant to the prior art rejection in the form of the following limitation: "the spring being maximally deformed when the blade is pivoted to an intermediate point between the extended position and retracted position, thereby causing the spring to assist opening of the blade when the blade is pivoted from the retracted position toward the extended position beyond the intermediate point." This limitation patentably distinguishes reissue claim 23 over Pradel which features an extension spring that is maximally deformed only when the blade reaches the fully retracted position. Thus, reissue claim 23 is narrower than the amended claim in an aspect germane to the prior art rejection, and only broader than the amended claim in aspects unrelated to the rejection, thereby rendering the recapture rule inapplicable under principle 3(b) of *Clement*.

Chart 4 – Comparison of Original Claim 1 and Reissue Claim 45

Original Claim 1	Reissue Claim 45	Broadened Aspects from Step 1
A folding knife, comprising:	A folding knife, comprising:	
a handle defining a blade cavity and a first end;	a handle;	Broader in aspect related to elimination of blade cavity.
a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected	a blade pivotally coupled to the handle to be moveable about a blade pivot point, such that the blade moves	Broader in aspect related to replacement of blade pivot with blade pivot point.

Original Claim 1	Reissue Claim 45	Broadened Aspects from Step 1
to said first end of said handle for allowing pivotal movement of said blade about said blade pivot between an extended position outside of said blade cavity and a retracted position substantially within said blade cavity;	between a stowed position and a deployed position;	Broader in aspect related to elimination of blade position with respect to the blade cavity.
a spring biased plunger carried in said blade cavity having a first end and second end opposite said first end; said first end of said plunger including a pivotal connector pivotally connecting said plunger to said handle; said second end of said plunger being pivotally connected to said first end of said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended position.	a plunger coupled between the handle and the blade such that a portion of the plunger remains a fixed distance from the blade pivot point; and a spring coupled to the plunger to act on the blade to urge the blade into the stowed position when the blade is moved to the stowed position, and operates on the blade to urge the blade toward the deployed position when the blade is moved by an outside force from the stowed position at least partially toward the deployed position.	~~Broader in aspect related to elimination of plunger being longitudinally extending~~. Broader in aspect related to elimination of plunger located in blade cavity. Broader in aspect related to lack of positive recitation of pivotal connector. Broader in aspect related to elimination of plunger being pivotally connected at a first end to a handle and a second end to a blade. ~~Broader in aspect related to elimination of plunger being longitudinally slidably carried by a pivotal connector~~.

A review of the broadened aspects of reissue claim 45 that relate to surrendered subject matter reveals that they all relate to aspects that would not distinguish the present invention over the knife disclosed in Pradel and therefore are not relevant to the prior art rejection.

Conversely, reissue claim 45 includes a narrowing aspect relevant to the prior art rejection in the form of the following limitation: "a spring coupled to the plunger to act on the blade to urge the blade into the stowed position when the blade is moved to the stowed position, and operates on the blade to urge the blade toward the deployed position when the blade is moved by an outside force from the stowed position at least partially toward the deployed

position." This limitation patentably distinguishes reissue claim 45 over Pradel which features an extension spring that acts on a connecting rod and thence a blade to urge the blade into an extended position. The extension spring of Pradel never urges the blade towards a stowed position, nor does Pradel feature a knife wherein the blade is moved by an outside force at least partially toward the deployed position. Thus, reissue claim 45 is narrower than the amended claim in an aspect germane to the prior art rejection, and only broader than the amended claim in aspects unrelated to the rejection, thereby rendering the recapture rule inapplicable under principle 3(b) of *Clement*.

Chart 5 – Comparison of Original Claim 1 and Reissue Claim 52

Original Claim 1	Reissue Claim 52	Broadened Aspects from Step 1
A folding knife, comprising:	A folding knife, comprising:	
a handle defining a blade cavity and a first end;	a handle;	Broader in aspect related to elimination of blade cavity.
a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for allowing pivotal movement of said blade about said blade pivot between an extended position outside of said blade cavity and a retracted position substantially within said blade cavity;	a blade having a tang coupled to the handle, the blade configured to rotate, relative to the handle, between a retracted position and an extended position;	Broader in aspect related to elimination of blade pivot. Broader in aspect related to elimination of blade position with respect to the blade cavity.
a spring biased plunger carried in said blade cavity having a first end and second end opposite said first end; said first end of said plunger including a pivotal connector pivotally connecting said plunger to said	biasing means for holding the blade in the retracted position in the handle while the blade is in the retracted position and for biasing the blade toward the extended position relative to the handle when the blade is moved from the retracted	Broader in aspect related to replacement of plunger with biasing means. Broader in aspect related to elimination of plunger located in blade cavity. Broader in aspect related to lack of positive recitation of pivotal

Original Claim 1	Reissue Claim 52	Broadened Aspects from Step 1
handle; said second end of said plunger being pivotally connected to said first end of said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended position.	position past a point of maximum bias toward the extended position; and	connector. Broader in aspect related to elimination of plunger being pivotally connected at a first end to a handle and a second end to a blade. ~~Broader in aspect related to elimination of plunger being longitudinally slidably carried by a pivotal connector~~.
	moving means for moving the blade from the retracted position to the extended position with one hand while holding the knife with the same one hand	

A review of the broadened aspects of reissue claim 52 that relate to surrendered subject matter reveals that they all relate to aspects that would not distinguish the present invention over the knife disclosed in Pradel and therefore are not relevant to the prior art rejection.

Conversely, reissue claim 52 includes a narrowing aspect relevant to the prior art rejection in the form of the following limitation: "biasing means for holding the blade in the retracted position in the handle while the blade is in the retracted position and for biasing the blade toward the extended position relative to the handle when the blade is moved from the retracted position past a point of maximum bias toward the extended position." This limitation patentably distinguishes reissue claim 52 over Pradel which features an extension spring for biasing the blade toward an extended position, but not for conversely biasing the blade toward a retracted position as required. Furthermore, the extension spring of Pradel has maximum bias at the fully retracted position and not at an intermediate blade position. Thus, reissue claim 52 is narrower than the amended claim in an aspect germane to the prior art rejection, and only broader than the amended claim in aspects unrelated to the rejection, thereby rendering the recapture rule inapplicable under principle 3(b) of *Clement*.

Chart 6 – Comparison of Original Claim 1 and Reissue Claim 58

Original Claim 1	Reissue Claim 58	Broadened Aspects from Step 1
A folding knife, comprising:	A folding knife, comprising:	
a handle defining a blade cavity and a first end;	a handle;	Broader in aspect related to elimination of blade cavity.
a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for allowing pivotal movement of said blade about said blade pivot between an extended position outside of said blade cavity and a retracted position substantially within said blade cavity;	a blade having a tang coupled to the handle, the blade configured to rotate, relative to the handle, through an arc between a retracted position and an extended position when an opening force is applied to the blade;	Broader in aspect related to elimination of blade pivot. Broader in aspect related to elimination of blade position with respect to the blade cavity.
	a contact pin coupled to the blade and extending outward from the blade, positioned such that a user, holding the knife in one hand, can apply an opening force to the blade with a thumb or finger of the same hand	
a spring biased plunger carried in said blade cavity having a first end and second end opposite said first end; said first end of said plunger including a pivotal connector pivotally connecting said plunger to said handle; said second end of said plunger being pivotally connected to said first end of said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended position.	a biasing element including a spring;	Broader in aspect related to replacement of plunger with biasing element. Broader in aspect related to elimination of plunger located in blade cavity. Broader in aspect related to lack of positive recitation of pivotal connector. Broader in aspect related to elimination of plunger being pivotally connected at a first end to a handle and a second end to a blade. ~~Broader in aspect related to~~

Original Claim 1	Reissue Claim 58	Broadened Aspects from Step 1
		~~elimination of plunger being longitudinally slidably carried by a pivotal connector~~.
	a first coupling element operatively coupling a first end of the biasing element to the handle; and	
	a second coupling element operatively coupling a second end of the biasing element to the blade.	

A review of the broadened aspects of reissue claim 58 that relate to surrendered subject matter reveals that they all relate to aspects that would not distinguish the present invention over the knife disclosed in Pradel and therefore are not relevant to the prior art rejection.

Conversely, reissue claim 58 includes a narrowing aspect relevant to the prior art rejection in the form of the following limitation: "a contact pin on the blade, extending perpendicular to a plane of travel of the blade and positioned such that a user, holding the knife in one hand, can apply an opening force to the blade with a thumb or finger of the same hand." This limitation patentably distinguishes reissue claim 58 from Pradel because Pradel does not disclose, nor does it require, a contact pin for opening the blade in light of the fact that Pradel relates to an automatic knife that opens without manual movement of the blade. Thus, reissue claim 58 is narrower than the amended claim in an aspect germane to the prior art rejection, and only broader than the amended claim in aspects unrelated to the rejection, thereby rendering the recapture rule inapplicable under principle 3(b) of *Clement*.

Chart 7 – Comparison of Original Claim 1 and Reissue Claim 62

Original Claim 1	Reissue Claim 62	Broadened Aspects from Step 1
A folding knife, comprising:	A folding knife, comprising:	
a handle defining a blade cavity and a first end;	a handle;	Broader in aspect related to elimination of blade cavity
a blade having a first end and a	a blade having a tang	Broader in aspect related to

Original Claim 1	Reissue Claim 62	Broadened Aspects from Step 1
second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for allowing pivotal movement of said blade about said blade pivot between an extended position outside of said blade cavity and a retracted position substantially within said blade cavity;	coupled to the handle, the blade configured to rotate, relative to the handle, through an arc between a retracted position and an extended position when an opening force is applied to the blade;	elimination of blade pivot; and Broader in aspect related to elimination of blade position with respect to the blade cavity
	a contact pin on the blade, extending perpendicular to a plane of travel of the blade and positioned such that a user, holding the knife in one hand, can apply an opening force to the blade with a thumb or finger of the same hand	
a spring biased plunger carried in said blade cavity having a first end and second end opposite said first end; said first end of said plunger including a pivotal connector pivotally connecting said plunger to said handle; said second end of said plunger being pivotally connected to said first end of said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended position.	a biasing element including a spring, configured to apply a closing force to the blade while the blade is in the retracted position;	Broader in aspect related to replacement of plunger with biasing element; Broader in aspect related to elimination of plunger located in blade cavity; Broader in aspect related to lack of positive recitation of pivotal connector; Broader in aspect related to elimination of plunger being pivotally connected at a first end to a handle and a second end to a blade; and ~~Broader in aspect related to elimination of plunger being longitudinally slidably carried by a pivotal connector~~.
	a first coupling element operatively coupling a first end of the biasing element	

Original Claim 1	Reissue Claim 62	Broadened Aspects from Step 1
	to the handle; and	
	a second coupling element operatively coupling a second end of the biasing element to the blade.	

A review of the broadened aspects of reissue claim 62 that relate to surrendered subject matter reveals that they all relate to aspects that would not distinguish the present invention over the knife disclosed in Pradel and therefore are not relevant to the prior art rejection.

Conversely, reissue claim 62 includes a narrowing aspect relevant to the prior art rejection in the form of the following limitation: "a contact pin coupled to the blade and extending outward from the blade, positioned such that a user, holding the knife in one hand, can apply an opening force to the blade with a thumb or finger of the same hand." This limitation patentably distinguishes reissue claim 62 from Pradel because Pradel does not disclose, nor does it require, a contact pin for opening the blade in light of the fact that Pradel relates to an automatic knife that opens without manual movement of the blade. Furthermore, reissue claim 62 recites "a biasing element including a spring, configured to apply a closing force to the blade while the blade is in the retracted position," which is not disclosed or taught by Pradel. Rather, Pradel teaches the use of an extension spring to apply an opening force for automatic opening of a knife blade. Thus, reissue claim 62 is narrower than the amended claim in an aspect germane to the prior art rejection, and only broader than the amended claim in aspects unrelated to the rejection, thereby rendering the recapture rule inapplicable under principle 3(b) of *Clement*.

Chart 8 – Comparison of Original Claim 1 and Reissue Claim 63

Original Claim 1	Reissue Claim 63	Broadened Aspects from Step 1
A folding knife, comprising:	A folding knife, comprising:	
a handle defining a blade cavity and a first end;	a handle;	Broader in aspect related to elimination of blade cavity
a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected	a blade having a tang coupled to the handle, the blade configured to rotate, relative to the handle,	Broader in aspect related to elimination of blade pivot; and

Original Claim 1	Reissue Claim 63	Broadened Aspects from Step 1
to said first end of said handle for allowing pivotal movement of said blade about said blade pivot between an extended position outside of said blade cavity and a retracted position substantially within said blade cavity;	through an arc between a retracted position and an extended position when an opening force is applied to the blade;	Broader in aspect related to elimination of blade position with respect to the blade cavity
	a contact pin on the blade, extending perpendicular to a plane of travel of the blade and positioned such that a user, holding the knife in one hand, can apply an opening force to the blade with a thumb or finger of the same hand	
a spring biased plunger carried in said blade cavity having a first end and second end opposite said first end; said first end of said plunger including a pivotal connector pivotally connecting said plunger to said handle; said second end of said plunger being pivotally connected to said first end of said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended position.	a biasing element including a spring, configured to resist rotation of the blade toward the extended position while the blade is in the retracted position;	Broader in aspect related to replacement of plunger with biasing element; Broader in aspect related to elimination of plunger located in blade cavity; Broader in aspect related to lack of positive recitation of pivotal connector; Broader in aspect related to elimination of plunger being pivotally connected at a first end to a handle and a second end to a blade; and ~~Broader in aspect related to elimination of plunger being longitudinally slidably carried by a pivotal connector~~.
	a first coupling element operatively coupling a first end of the biasing element to the handle; and	
	a second coupling element	

Original Claim 1	Reissue Claim 63	Broadened Aspects from Step 1
	operatively coupling a second end of the biasing element to the blade.	

A review of the broadened aspects of reissue claim 63 that relate to surrendered subject matter reveals that they all relate to aspects that would not distinguish the present invention over the knife disclosed in Pradel and therefore are not relevant to the prior art rejection.

Conversely, reissue claim 63 includes a narrowing aspect relevant to the prior art rejection in the form of the following limitation: "a contact pin on the blade, extending perpendicular to a plane of travel of the blade and positioned such that a user, holding the knife in one hand, can apply an opening force to the blade with a thumb or finger of the same hand." This limitation patentably distinguishes reissue claim 63 from Pradel because Pradel does not disclose, nor does it require, a contact pin for opening the blade in light of the fact that Pradel relates to an automatic knife that opens without manual movement of the blade. Furthermore, reissue claim 63 recites "a biasing element including a spring, configured to resist rotation of the blade toward the extended position while the blade is in the retracted position," which is not disclosed or taught by Pradel. Rather, Pradel teaches the use of an extension spring to apply an opening force for automatic opening of a knife blade and thus assists rather than resists rotation of the blade toward an extended position when in the retracted position. Thus, reissue claim 63 is narrower than the amended claim in an aspect germane to the prior art rejection, and only broader than the amended claim in aspects unrelated to the rejection, thereby rendering the recapture rule inapplicable under principle 3(b) of *Clement*.

Chart 9 – Comparison of Original Claim 1 and Reissue Claim 65

Original Claim 1	Reissue Claim 65	Broadened Aspects from Step 1
A folding knife, comprising:	A folding knife, comprising:	
a handle defining a blade cavity and a first end;	a handle having a blade cavity and a first end;	
a blade having a first end and a second end opposite	a blade having a first end and a second end opposite said first	

said first end; said first end of said blade having a blade pivot connected to said first end of said handle for allowing pivotal movement of said blade about said blade pivot between an extended position outside of said blade cavity and a retracted position substantially within said blade cavity;	end; said first end of said blade having an aperture; a blade pivot connected to said first end of said handle and extending through the aperture for pivotal movement of said blade about said blade pivot between an extended position wherein the blade is outside of said blade cavity and a retracted position wherein the majority of the blade is within said blade cavity;	
a spring biased plunger carried in said blade cavity having a first end and second end opposite said first end; said first end of said plunger including a pivotal connector pivotally connecting said plunger to said handle; said second end of said plunger being pivotally connected to said first end of said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended position.	a plunger including a spring, the plunger pivotally connected to the blade at a first end, and operatively coupled to the handle at a second end, the spring being maximally deformed when the blade is pivoted to an intermediate point between the extended position and retracted position, thereby causing the spring to assist opening of the blade when the blade is pivoted from the retracted position toward the extended position beyond the intermediate point; and	Broader in aspect related to elimination of plunger located in blade cavity; Broader in aspect related to lack of positive recitation of pivotal connector; Broader in aspect related to elimination of plunger being pivotally connected to a handle; and ~~Broader in aspect related to elimination of plunger being longitudinally slidably carried by a pivotal connector~~.
	a safety member connected to said handle for movement between a locking position and an unlocking position; said safety member defining an engagement portion projecting into a path of movement of said plunger when said safety member is in said locking position for contacting and restraining movement of said plunger when said blade is in said extended position, to thereby lock said blade in said extended position.	

A review of the broadened aspects of reissue claim 65 that relate to surrendered subject matter reveals that they all relate to aspects that would not distinguish the present invention over the knife disclosed in Pradel and therefore are not relevant to the prior art rejection.

Conversely, reissue claim 65 includes a narrowing aspect relevant to the prior art rejection in the form of the following limitation: "spring being maximally deformed when the blade is pivoted to an intermediate point between the extended position and retracted position, thereby causing the spring to assist opening of the blade when the blade is pivoted from the retracted position toward the extended position beyond the intermediate point." This limitation patentably distinguishes reissue claim 65 over Pradel which features an extension spring that is maximally deformed when the blade is in the retracted position and assists opening during the entire range of blade motion. Furthermore, reissue claim 65 recites a "safety member defining an engagement portion projecting into a path of movement of said plunger when said safety member is in said locking position for contacting and restraining movement of said plunger when said blade is in said extended position," which is not disclosed or taught by Pradel. Rather, Pradel teaches the use of a locking element 18 that prevents depression of a mobile handle portion and hence deployment of the blade 11. See Figure 19, above. The locking element of Pradel does not contact, restrain or otherwise interact with the plunger of Pradel (*i.e.*, connecting rod 14 and extension spring 15). Thus, reissue claim 65 is narrower than the amended claim in aspects germane to the prior art rejection, and only broader than the amended claim in aspects unrelated to the rejection, thereby rendering the recapture rule inapplicable under principle 3(b) of *Clement*.

Chart 10 – Comparison of Original Claim 1 and Reissue Claim 66

Original Claim 1	Reissue Claims 66	Broadened Aspects from Step 1
A folding knife, comprising:	A folding knife, comprising:	
a handle defining a blade cavity and a first end;	a handle;	Broader in aspect related to elimination of blade cavity
a blade having a first end and a second end opposite said first end; said first end of said blade having a blade pivot connected to said first end of said handle for allowing pivotal movement of said blade about said blade pivot between an extended position outside of said blade cavity and a retracted position substantially within said blade cavity;	a blade having a tang coupled to the handle, the blade configured to rotate, relative to the handle, through an arc between a retracted position and an extended position when an opening force is applied to the blade;	Broader in aspect related to elimination of blade pivot; and Broader in aspect related to elimination of blade position with respect to the blade cavity
	a contact pin on the blade, extending perpendicular to a plane of travel of the blade and positioned such that a user, holding the knife in one hand, can apply opening force to the blade with a finger of the same hand;	
a spring biased plunger carried in said blade cavity having a first end and second end opposite said first end; said first end of said plunger including a pivotal connector pivotally connecting said plunger to said handle; said second end of said plunger being pivotally connected to said first end of said blade for orbital movement about said blade pivot as said blade moves between said retracted and extended position.	a biasing element including a spring, configured to resist rotation of the blade toward the extended position while the blade is in the retracted position; and	Broader in aspect related to replacement of plunger with biasing element; Broader in aspect related to lack of positive recitation of pivotal connector; Broader in aspect related to elimination of plunger being pivotally connected at a first end to a handle and a second end to a blade; and ~~Broader in aspect related to elimination of plunger being longitudinally slidably~~

Original Claim 1	Reissue Claims 66	Broadened Aspects from Step 1
		~~carried by a pivotal connector~~.
	a first coupling element operatively coupling a first end of the biasing element to the handle;	
	a second coupling element operatively coupling a second end of the biasing element to the blade; and	
	a locking member positioned in the handle and having a first position in which the blade may be freely moved between the retracted and extended positions and a second position in which the blade is locked in the extended position.	

A review of the broadened aspects of reissue claim 66 that relate to surrendered subject matter reveals that they all relate to aspects that would not distinguish the present invention over the knife disclosed in Pradel and therefore are not relevant to the prior art rejection.

Conversely, reissue claim 66 includes a narrowing aspect relevant to the prior art rejection in the form of the following limitation: "a contact pin on the blade, extending perpendicular to a plane of travel of the blade and positioned such that a user, holding the knife in one hand, can apply opening force to the blade with a finger of the same hand." This limitation patentably distinguishes reissue claim 66 from Pradel because Pradel does not disclose, nor does it require, a contact pin for opening the blade in light of the fact that Pradel relates to an automatic knife that opens without manual movement of the blade. Furthermore, reissue claim 66 recites "a biasing element including a spring, configured to resist rotation of the blade toward the extended position while the blade is in the retracted position," which is not disclosed or taught by Pradel. Rather, Pradel teaches the use of an extension spring to apply an opening force for automatic opening of a knife blade and thus assists rather than resists rotation

of the blade toward an extended position when in the retracted position. Thus, reissue claim 65 is narrower than the amended claim in an aspect germane to the prior art rejection, and only broader than the amended claim in aspects unrelated to the rejection, thereby rendering the recapture rule inapplicable under principle 3(b) of *Clement*.

Summary of Recapture Analysis

As can be appreciated from the above, all of the pending independent reissue claims (and thus, necessarily the dependent claims thereof) include narrowing aspects that distinguish such claims over Pradel – the sole reference cited in rejecting the originally submitted claims. This is confirmed by the fact that the present Examiner does not cite Pradel as anticipating or rendering obvious the pending reissue claims. In addition, it is shown that there are no aspects of the present reissue claims broader than the amended claim (*i.e.*, original claim 1) that are germane to the prior art rejection (*i.e.*, anticipation by Pradel). Rather, the broadened aspects identified above that relate to surrendered subject matter all pertain to aspects unrelated to the rejection because such aspects were not and are not being relied upon to distinguish Pradel. For example, the aspect related to "a handle defining a blade cavity" is clearly disclosed and well known in the art. Thus, the broadened recitation of simply "a handle" is a broadening completely unrelated to the rejection. Put another way, adding the limitation of "a handle defining a blade cavity" would not patentably distinguish an otherwise non-patentable claim over Pradel and therefore can not be considered an aspect germane to the rejection. Therefore, in accordance with principle 3(b) of *Clement*, the recapture rule does not bar reissue claims 23-25, 27-29, 45, 52, 54, 58-60, 62, 63, 65 and 66, and therefore, the rejection of these claims under 35 U.S.C. § 251 should be withdrawn.

Noted Disagreement Over the Application of the Recapture Rule

The crux of the disagreement over the application of the recapture rule in this case relates to the scope of surrendered subject matter – the Examiner taking the position that any claim not including a limitation added by way of amendment in the prosecution of the original application to overcome prior art is *per se* a recapture of surrendered subject matter. In contrast, Appellant takes the position that surrendered subject matter is a fact-specific analysis that requires a determination whether a given applicant has admitted certain scope to be unpatentable

– an analysis, which in this case, establishes only that claim 1 as originally presented was impliedly admitted to be unpatentable. *See Clement*, 131 F.3d at 1469 ("recapture rule does not apply in the absence of evidence that the applicant's amendment was 'an admission that the scope of that claim was not in fact patentable.'").

This is not a case where an applicant has touted that a certain feature is key or critical to patentability over the cited art or a case in which the allegedly surrender-generating limitation was contained in the original claims or in a claim subsequently amended in light of prior art rejections. Rather, this is a case in which one of a number of possible distinguishing limitations was added to overcome a single § 102(b) rejection in light of a single allegedly anticipating reference (*i.e.*, Pradel). From this, it can only be concluded that the scope of amended claim 1 (*i.e.*, the originally presented claim) was surrendered.

As noted in footnote 1, above, the disagreement at issue here has been recognized explicitly by the Board. *See Ex Parte Browning*, Appeal No. 2007-0700, at 50 (Bd. Pat. App. & Inter. June 20, 2007). However, in support of Appellant's position, it must be noted that the above recapture analysis is consistent with and in fact explicitly set forth in *Clement* and *Eggert*, cases which are binding on the Board. Appellant is aware that, at this point in time, some judges of the Board have declined to follow *Eggert* in view of an alleged conflict with *North American Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 75 USPQ2d 1545 (Fed. Cir. 2005). *See, e.g., Ex Parte Browning*, Appeal No. 2007-0700 (Bd. Pat. App. & Inter. 2007). A review of the prosecution history in *North American Container*, however, dispels the presence of any such conflict, as the surrender-generating limitation of the issued claims in that case was contained in a finally rejected claim of the parent application that was subsequently canceled in its entirety, and thus legitimately considered surrendered subject matter. *See Ex Parte Kraus*, Appeal No. 2005-0841, at 83-85 (Bd. Pat. App. & Inter. 2006) (discussing prosecution history of *North American Container* in light of the recapture rule) (Judges Nase, Garris, Delmendo and Franklin concurring-in-part and dissenting-in-part). Thus, *North American Container* provides no support for overruling or disregarding the analysis announced in *Clement* and followed in *Eggert (*and applied in the present case above). In fact, the continuing validity of the recapture test set forth in *Clement* was recently confirmed in a case subsequent to *North American Container*. *See MBO Laboratories, Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 81 USPQ2d 1661 (Fed. Cir. 2007) (noting that the required analysis in a recapture case is described in depth in *Clement*).

To apply a *per se* rule rejecting all of the reissue claims in this case that do not contain the "plunger being slidably carried" limitation is contrary to binding precedent and contrary to the language of 35 U.S.C. § 251 which permits broadened claims in a reissue. Conversely, applying the recapture test in accordance with *Clement* (and *Eggert*) to allow Appellant to correct the failure to claim an embodiment which is narrower than any surrendered subject matter in an aspect germane to the prior art rejection and broader only in aspects unrelated to the rejection, is the very type of error 35 U.S.C. § 251 is meant to permit to be corrected.

To the extent the Board rejects Appellant's position and continues to view *North American Container* as conflicting with *Eggert*, the present reissue claims nevertheless avoid the recapture rule based on the "Materially Narrowed in Overlooked Aspects" analysis explained in *Ex Parte Musaka*, Appeal No. 2007-3582, at 55-56 (Bd. Pat. App. & Inter. 2008) ("A reissue claim is materially narrowed and thus avoids the recapture rule when limited to aspects of the invention: (1) which had not been claimed and thus were overlooked during prosecution of the original patent application; and (2) which patentably distinguish over the prior art.") (non-precedential). The material limitations now found in the pending reissue claims were never presented during administrative examination of the original application (*i.e.*, such aspects were overlooked) and, as explained above, patentably distinguish each of the reissue claims over Pradel and the other art of record. Accordingly, the rejection based under 35 U.S.C. § 251 should be withdrawn on this alternative ground.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC

/Jared M.Barrett/
Jared M. Barrett
Registration No. 57,933

JMB:jld

701 Fifth Avenue, Suite 5400
Seattle, Washington 98104
Phone: (206) 622-4900
Fax: (206) 682-603

VIII. CLAIMS APPENDIX

The claims listed herein are formatted in accordance with reissue practice as specified in § 1.173 and MPEP § 1453, except that claims not at issue are not provided. A complete listing of the pending claims without markings is provided for convenience as Appendix G.

23. (New) A folding knife, comprising:

a handle having a blade cavity and a first end;

a blade having a first end and a second end opposite said first end, said first end of said blade having an aperture;

a blade pivot connected to said first end of said handle and extending through the aperture for pivotal movement of said blade about said blade pivot between an extended position wherein the blade is outside of said blade cavity and a retracted position wherein the majority of the blade is within said blade cavity; and

a plunger including a spring, the plunger pivotally connected to the blade at a first end, and pivotally coupled to the handle at a second end, the spring being maximally deformed when the blade is pivoted to an intermediate point between the extended position and retracted position, thereby causing the spring to assist opening of the blade when the blade is pivoted from the retracted position toward the extended position beyond the intermediate point.

24. (New) A knife as defined in claim 23, wherein said blade includes said first end of said blade having an extension projecting outwardly from said handle when said blade is in said retracted position; said extension defining an extreme edge portion with a plurality of ridges thereon for contact by a user when moving the blade from said retracted position to said extended position.

25. (New) A knife as defined in claim 23, further comprising a safety member connected to said handle for movement between a locking position and an unlocking position; said safety member defining an engagement portion projecting into a path of movement of said

plunger when said safety member is in said locking position for contacting and restraining movement of said plunger when said blade is in said extended position, to thereby lock said blade in said extended position.

27. (New) A knife as defined in claim 23, further comprising said handle defining a first side and a second side opposite said first side and a belt clip connected to said handle adjacent one of said first and second sides of said handle.

28. (New) A knife as defined in claim 23, wherein the first end of said plunger includes a clevis having a pin pivotally connected to said first end of said blade.

29. (New) A knife as defined in claim 23, wherein said first end of said blade includes an arcuate slot and wherein said handle includes a pin carried in said arcuate slot, said arcuate slot having a first end and a second end, and said first end of said arcuate slot limiting said blade from movement beyond said extended position.

45. (New) A knife comprising:

a handle;

a blade pivotally coupled to the handle to be moveable about a blade pivot point, such that the blade moves between a stowed position and a deployed position;

a plunger coupled between the handle and the blade such that a portion of the plunger remains a fixed distance from the blade pivot point; and

a spring coupled to the plunger to act on the blade to urge the blade into the stowed position when the blade is moved to the stowed position, and operates on the blade to urge the blade toward the deployed position when the blade is moved by an outside force from the stowed position at least partially toward the deployed position.

52. (New) A folding knife comprising:

a handle;

a blade having a tang coupled to the handle, the blade configured to rotate, relative to the handle, between a retracted position and an extended position;

biasing means for holding the blade in the retracted position in the handle while the blade is in the retracted position and for biasing the blade toward the extended position relative to the handle when the blade is moved from the retracted position past a point of maximum bias toward the extended position; and

moving means for moving the blade from the retracted position to the extended position with one hand while holding the knife with the same one hand.

54. (New) The folding knife of claim 52 wherein the moving means comprises at least one of a plurality of ridges formed on the tang of the blade, a plurality of directional saw-like teeth formed on the tang of the blade, or a pin coupled to an upper portion of the blade.

58. (New) A folding knife comprising:

a handle;

a blade having a tang coupled to the handle, the blade configured to rotate, relative to the handle, through an arc between a retracted position and an extended position when an opening force is applied to the blade;

a contact pin coupled to the blade and extending outward from the blade, positioned such that a user, holding the knife in one hand, can apply an opening force to the blade with a thumb or finger of the same hand;

a biasing element including a spring;

a first coupling element operatively coupling a first end of the biasing element to the handle; and

a second coupling element operatively coupling a second end of the biasing element to the blade.

59. (New) The knife of claim 58 wherein the biasing element is arranged such that the spring thereof increases in tension to a point of maximum tension as the blade is moved through the arc from the retracted position toward the extended position, then decreases in tension as the blade continues past the point of maximum tension toward the extended position.

60. (New) The knife of claim 58 further including a plurality of ridges positioned on the tang of the blade.

62. (New) A folding knife comprising:

a handle;

a blade having a tang coupled to the handle, the blade configured to rotate, relative to the handle, through an arc between a retracted position and an extended position when an opening force is applied to the blade;

a contact pin on the blade, positioned such that a user, holding the knife in one hand, can apply an opening force to the blade with a thumb or finger of the same hand;

a biasing element including a spring, configured to apply a closing force to the blade while the blade is in the retracted position;

a first coupling element operatively coupling a first end of the biasing element to the handle; and

a second coupling element operatively coupling a second end of the biasing element to the blade.

63. (New) A folding knife comprising:

a handle;

a blade having a tang coupled to the handle, the blade configured to rotate, relative to the handle, through an arc between a retracted position and an extended position when an opening force is applied to the blade;

a contact pin on the blade, extending perpendicular to a plane of travel of the blade and positioned such that a user, holding the knife in one hand, can apply an opening force to the blade with a thumb or finger of the same hand;

a biasing element including a spring, configured to resist rotation of the blade toward the extended position while the blade is in the retracted position;

a first coupling element operatively coupling a first end of the biasing element to the handle; and

a second coupling element operatively coupling a second end of the biasing element to the blade.

65. (New) A folding knife, comprising:

a handle having a blade cavity and a first end;

a blade having a first end and a second end opposite said first end; said first end of said blade having an aperture;

a blade pivot connected to said first end of said handle and extending through the aperture for pivotal movement of said blade about said blade pivot between an extended position wherein the blade is outside of said blade cavity and a retracted position wherein the majority of the blade is within said blade cavity;

a plunger including a spring, the plunger pivotally connected to the blade at a first end, and operatively coupled to the handle at a second end, the spring being maximally deformed when the blade is pivoted to an intermediate point between the extended position and retracted position, thereby causing the spring to assist opening of the blade when the blade is pivoted from the retracted position toward the extended position beyond the intermediate point; and

a safety member connected to said handle for movement between a locking position and an unlocking position; said safety member defining an engagement portion projecting into a path of movement of said plunger when said safety member is in said locking position for contacting and restraining movement of said plunger when said blade is in said extended position, to thereby lock said blade in said extended position.

66. (New) A folding knife comprising:

a handle;

a blade having a tang coupled to the handle, the blade configured to rotate, relative to the handle, through an arc between a retracted position and an extended position when an opening force is applied to the blade;

a contact pin on the blade, extending perpendicular to a plane of travel of the blade and positioned such that a user, holding the knife in one hand, can apply opening force to the blade with a finger of the same hand;

a biasing element including a spring, configured to resist rotation of the blade toward the extended position while the blade is in the retracted position;

a first coupling element operatively coupling a first end of the biasing element to the handle;

a second coupling element operatively coupling a second end of the biasing element to the blade; and

a locking member positioned in the handle and having a first position in which the blade may be freely moved between the retracted and extended positions and a second position in which the blade is locked in the extended position.

IX. EVIDENCE APPENDIX

Appendix A is a Screenshot from www.meyercousa.com/about.lasso

Appendix B is a Final Office Action mailed March 13, 2008.

Appendix C is a Non-Final Office Action mailed July 24, 1997.

Appendix D is an Interview Summary dated October 16, 1997.

Appendix E is an Amendment dated October 24, 1997.

Appendix F is an Interview Summary dated January 19, 1998.

Appendix G is an Unmarked Listing of Pending Claims

X. RELATED PROCEEDINGS APPENDIX

None.